



CCHN/CHAMPS Health Equity Learning Series  
Organizational Commitment and Strategies for  
Health Equity Communication  
Tuesday, September 22, 2020

## **PARTICIPANT HANDOUTS**

# **Organizational Commitment and Strategies for Health Equity Communication**

*Thank you for attending today's training. By doing so you are strengthening the ability of your community-based and patient-directed health center to deliver comprehensive, culturally competent, high-quality primary health care services.*

### **Presented by:**

Dwayne C. Proctor, PhD, Robert Wood Johnson Foundation (RWJF), Julie Reiskin, LCSW, and Andrew C. Montoya, JD, Colorado Cross-Disability Coalition (CCDC)

### **Live Broadcast Date/Time:**

Tuesday, September 22, 2020  
12:00–1:15PM Mountain Time / 1:00–2:15PM Central Time

### **Target Audience:**

The presentations in the series are intended for health center and PCA staff from various positions including clinical and non-clinical. Please see the registration information sent out prior to each training for more information about learning objectives and other details.

### **Event Overview:**

Communicating for health equity is critical for organizations and individuals as they work to combat the impact of systemic marginalization and oppression. This presentation will share what the Robert Wood Johnson Foundation has discovered about communicating health equity to diverse audiences. Attendees will learn about tools and strategies to create a widespread and consistent understanding of what equity is, why it matters for health, and the role we all play in helping achieve it. The presentation will also offer an introduction to specific considerations for communicating with people with disabilities.

### **Learning Objectives:**

Though this session, participants will:

- Learn why communication is important to combat health disparities and strive for health equity.
- Learn about the research that has informed the way RWJF communicates about health equity.
- Learn about tools and strategies to create a widespread and consistent understanding of what equity is, why it matters for health, and the role we all play in helping achieve it.
- Be introduced to specific considerations when working with people with disabilities and how these considerations can apply to other populations experiencing health disparities.

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**CCHN/CHAMPS ARCHIVES**

This event will be archived online. This online version will be posted within two weeks of the live event and will be available for at least one year from the live presentation date.

For information about all CCHN archives, please visit:  
[www.CCHN.org/webinar-archive](http://www.CCHN.org/webinar-archive).

For information about all CHAMPS archives, please visit: [www.CHAMPSonline.org/events-trainings/distance-learning](http://www.CHAMPSonline.org/events-trainings/distance-learning).

**DESCRIPTION OF CCHN**

The Colorado Community Health Network (CCHN) represents the 20 Colorado Community Health Centers that together are the backbone of the primary health care safety-net in Colorado. For more information about CCHN, please visit [www.CCHN.org](http://www.CCHN.org).

**DESCRIPTION OF CHAMPS**

Community Health Association of Mountain/Plains States (CHAMPS) is a non-profit organization dedicated to supporting all Region VIII (CO, MT, ND, SD, UT, and WY) federally funded Community, Migrant, and Homeless Health Centers they can better serve our patients and communities. Currently, CHAMPS programs and services focus on education and training, collaboration and networking, workforce development, and the collection and dissemination of regional data. For more information about CHAMPS, and the benefits of CHAMPS Organizational Membership, please visit [www.CHAMPSonline.org](http://www.CHAMPSonline.org).

## **SPEAKER BIOGRAPHIES**



**Dwayne C. Proctor**, PhD, Senior Adviser to the President, believes that the Robert Wood Johnson Foundation's (RWJF) vision for building a Culture of Health presents a unique opportunity to achieve health equity by advancing and promoting innovative systems changes related to the social determinants of health.

Proctor came to RWJF in 2002 as a senior communications and program officer, providing strategic guidance and resources for several child health and risk-prevention initiatives. Proctor is known for his strategic collaborations, having worked on several cross-sector initiatives and national programs that focused on decreasing childhood obesity disparities gaps. In 2014, as multiple municipalities and states were reporting signs of progress in

reversing the childhood obesity epidemic, Proctor was reassigned to direct RWJF's work to eliminate health disparities.

Before coming to the Foundation, Proctor was an assistant professor at the University of Connecticut School of Medicine where he taught courses on health communication and marketing to multicultural populations. Proctor received his doctoral, master's and bachelor's degrees in marketing and communication science from the University of Connecticut. He is the former chairman of the board of directors for the Association of Black Foundation Executives and currently is the chairman of the board of trustees for the National Association for the Advancement of Colored People (NAACP) Foundation.



**Julie Reiskin**, LCSW, is the Executive Director of the Colorado Cross-Disability Coalition (CCDC). CCDC advocates for social justice for people with all types of disabilities.

CCDC is a leading disability rights organization whose unique model of blending legal and non-attorney advocacy has achieved results for thousands of Coloradans with disabilities. With a motto of "Nothing About Us Without Us—Ever", CCDC has led the way in citizen or "client" engagement and CCDC trained advocates permeate the Colorado public policy arena. CCDC and Reiskin assist other organizations with assuring real and meaningful participation by "clients" at all levels. Ms. Reiskin offers expertise on nonprofit accountability and best practices,

publicly funded long-term community-based services, disability rights law, public benefits and the intersectionality of systemic and individual advocacy. Ms. Reiskin has proposed and helped to implement many solutions to create a sustainable and client friendly Medicaid program – such as the consumer direction as a delivery model, acted as a respected advocate for individuals, and has trained many others in health advocacy and health policy. Prior to becoming the Executive Director for CCDC in 1996, Ms. Reiskin served as the organization's policy analyst.

In 2010, Ms. Reiskin was appointed by President Obama to serve on the Board of Directors of the Legal Services Corporation as the client representative. In 2018, she was elected to serve on the Board of the ACLU of Colorado and was also appointed as a member of the Board of Trustees for the Denver Foundation.

Ms. Reiskin is an adjunct faculty member at the University of Denver at the Graduate School of Social Work teaching both policy advocacy and program development.

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Ms. Reiskin provides consulting with organizations seeking to improve, expand, or enhance their ability to effectively practice real and meaningful client/constituent engagement at all levels of the organization. She also helps organizations develop disability cultural competence. She has her MSW and BS from the University of Connecticut.



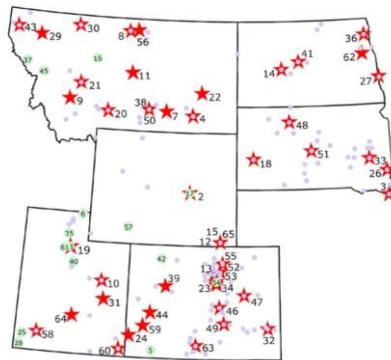
**Andrew C. Montoya**, Esq. began his work with CCDC in 2005 as a Legal Program Assistant. After a hiatus he took to attend law school at the Florida Coastal School of Law, he returned in 2012 to serve as CCDC's Legal Program Attorney. Andrew works on CCDC's civil rights cases and has developed many presentations regarding the laws CCDC enforces.

# CCHN/CHAMPS 2020 Health Equity Learning Series

## Organizational Commitment and Strategies for Health Equity Communication

Tuesday, September 22, 2020  
12:00-1:15PM MT/1:00-2:15PM CT

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COMMUNITY HEALTH ASSOCIATION OF  
MOUNTAIN/PLAINS STATES (CHAMPS)

[www.CHAMPSonline.org](http://www.CHAMPSonline.org)

2



HOW MANY PEOPLE ARE WATCHING THE  
EVENT AT YOUR COMPUTER, INCLUDING  
YOURSELF?

*Submit your answers using the Q&A Box.*



5

PLEASE INTRODUCE YOURSELF:  
NAME, ORGANIZATION, STATE

*Submit your answers using the Chat.*



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## POLL QUESTION

On a scale of 1 to 5, (1 being not at all and 5 being very), how comfortable are you communicating about and for health equity?



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## LEARNING OBJECTIVES

- Participants will learn why communication is important to combat health disparities and strive for health equity.
- Participants will learn about the research that has informed the way RWJF communicates about health equity.
- Participants will learn about tools and strategies to create a widespread and consistent understanding of what equity is, why it matters for health, and the role we all play in helping achieve it.
- Participants will be introduced to specific considerations when working with people with disabilities and how these considerations can apply to other populations experiencing health disparities.



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# Communicating about Equity to Build a Culture of Health

September 2020



Dwayne Proctor, PhD, *Senior Adviser*  
@drdwayneproctor



The Robert Wood Johnson Foundation (RWJF) is the nation's largest philanthropy dedicated solely to health.

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Since 1972, we've supported research and programs targeting some of America's most pressing health issues—from substance abuse to improving access to quality health care.





# What is a Culture of Health?

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**Public attitudes about health in 2015**

**34** The percentage of adults who say that your surroundings impact health and well-being.

Source: [Robert Wood Johnson Foundation, 2015](#)

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## Public attitudes about health in 2019

# 44

The percentage of Americans who say that where you live is an important factor for your health.

Source: [De Beaumont Foundation, 2019](#)



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## Audience Research

- **Interviewed 100+ leaders from sectors, including:**
  - Business
  - Community Development
  - Community-Based Organizations
  - Philanthropy
  - Government
  - Health care
  - Children Service & Education
- **Surveyed 3000+ people across the United States who work in sectors above and self-identify as liberal, progressive, or conservative.**



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## Reactions to “health equity”

- Not well understood as a standalone term
  - In some cases less than 50% of our participant groups understood it.



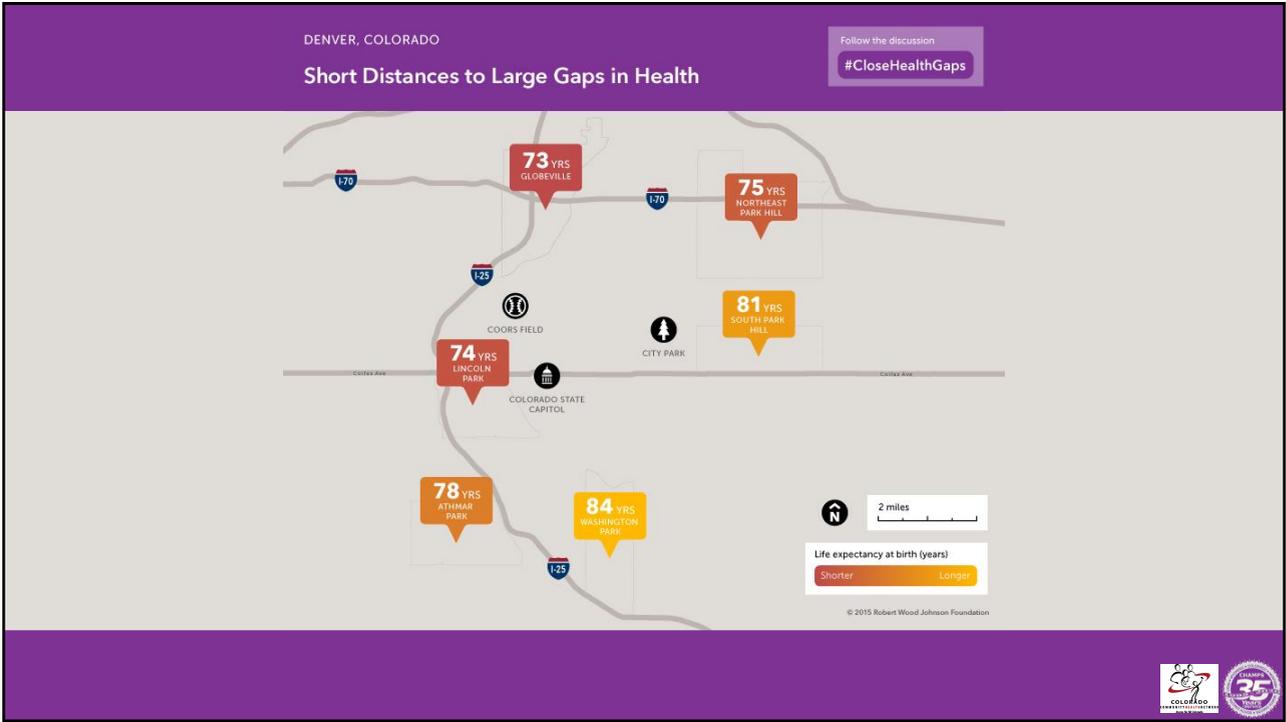
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## Tools to help increase understanding of health equity

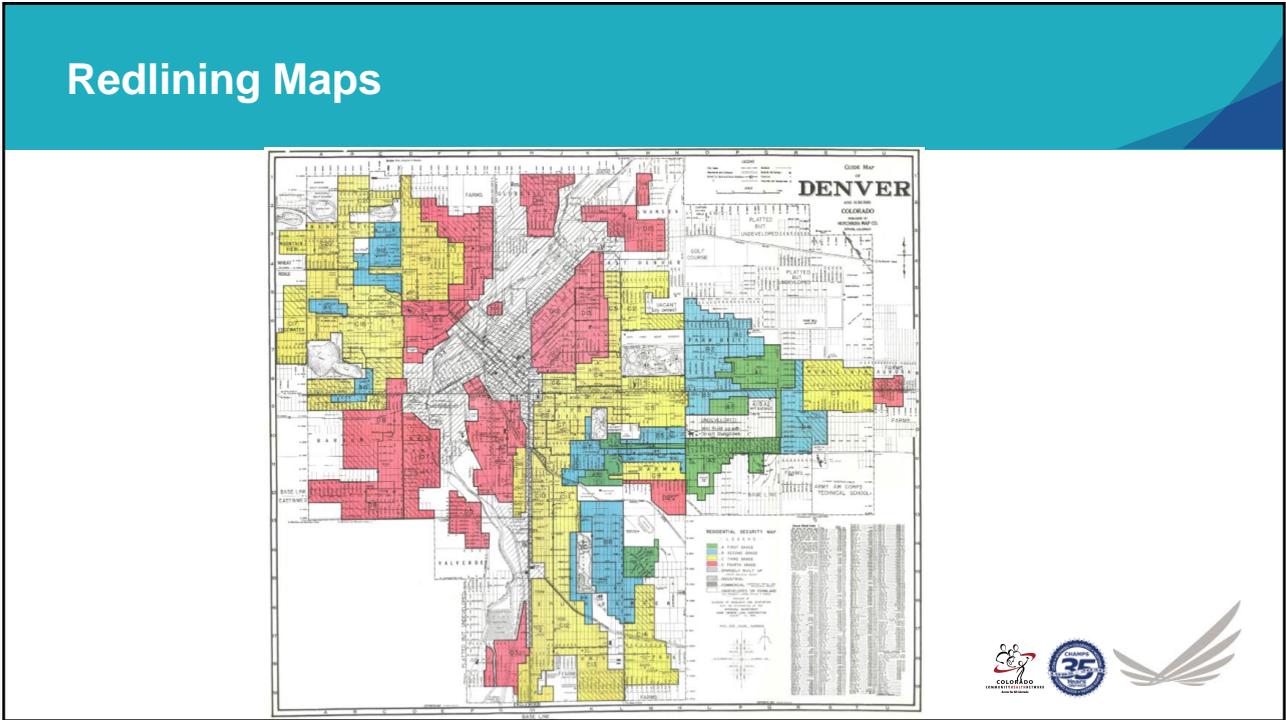


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# Helping people see their role in achieving health equity



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## Identifying specific action steps

### — Work in Health or Health Care:

- Adopt **new vital signs** to screen for the nonmedical factors influencing health.
- Commit to helping **low-income and non-English-speaking patients** get the care they need.
- Guard against the potential for **bias to influence medical care**.
- Make sure the **elderly, women, and racial/ethnic minorities** are adequately represented in **clinical trials**.
- Understand the effects of **adverse childhood experiences** and use **trauma-informed care**.

*[Achieving Health Equity, RWJF](#)*



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## Health Equity Principles for State and Local Leaders in Responding to, Reopening, and Recovering from COVID-19



Robert Wood Johnson Foundation

### Health Equity Principles

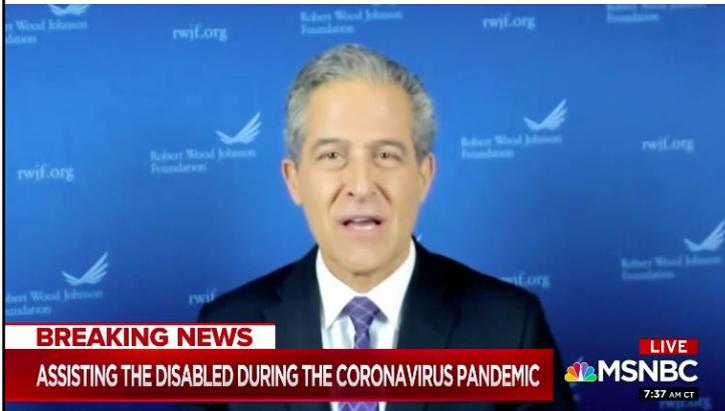
1. Collect, analyze and report disaggregated data.
2. Include those who are most affected in decisions, and benchmark progress based on their outcomes.
3. Establish and empower teams dedicated to racial equity.
4. Proactively fill policy gaps while advocating for more federal support.
5. Invest in public health, health care and social infrastructure.



## Other strategies for elevating the importance of equity



## Communicating via Leadership



**Rich Besser** ✓  
@DrRichBesser

Great action guide to equitable grant-making by [@Forward\\_Promise](#). We have much work to do to truly implement an intentional equity approach to our grant-making.

 **Forward Promise** @Forward\_Promise · Aug 5

"...no young man of color in America should feel as if good health, a safe neighborhood, or a good education is beyond his reach."

Download the action guide [forwardpromise.org/research-resources](https://forwardpromise.org/research-resources)



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## Publicly committing to equity, diversity and inclusion



We believe that only through valuing our differences and similarities, and remaining vigilant in advancing equity, will we be able to maintain an equitable workplace and actively pursue equity in all aspects of our work.

**RWJF Equity, Diversity and Inclusion Commitment**

February 2020

Source: [www.rwjf.org](http://www.rwjf.org)



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## Being public about our faults and stances



**Robert Wood Johnson Foundation:  
We honored sports teams with racist mascots. Not anymore.**

(May 7, 2018)

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***“The brutal killing of George Floyd at the hands of Minneapolis police officers and the unconscionably long list of black victims who preceded him must unite us and embolden us.”***

Richard Besser, MD (June 2, 2020)



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## Sharing data about our organization/staff

### All Staff by Race and Ethnicity

Show Data as text

	2014 (N=257)	2015 (N=266)	2016 (N=268)	2017 (N=278)	2018 (N=280)	2019 (N=289)
TWO OR MORE RACES	1.9%	2.3%	2.2%	2.2%	2.1%	2.5%
AMERICAN INDIAN OR ALASKA NATIVE	0%	0%	0%	0%	0.4%	0.4%
ASIAN	8.9%	9%	10.1%	10.8%	11.4%	11.9%
NATIVE HAWAIIAN OR OTHER PACIFIC ISLANDER	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
HISPANIC OR LATINX	6.2%	4.5%	4.1%	4.3%	2.9%	5.3%
BLACK OR AFRICAN AMERICAN	8.9%	10.2%	10.1%	9.0%	9.3%	11.9%
WHITE	73.5%	73.7%	73.1%	73.4%	73.6%	67.7%



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Thank You



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# FQHCs and Disability

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Effective Communication



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"Nothing About Us Without Us."

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## Colorado Cross-Disability Coalition Civil Rights Legal Program

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**Julie Reiskin**  
Executive Director



**Andrew C. Montoya**  
Attorney



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*"Nothing About Us Without Us."*

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## Poll Question

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**Effective Communication with patients and families is:**

- a) An important component of all aspects medical care
- b) Important for the support staff, they can get needed information and share with others on the team
- c) Important for the providers, they are making medical decisions about the patients.
- d) A nice luxury if you have the time and resources...but we do not have this luxury.



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# Definition of “Disability”

- “Disability” is a physical or mental impairment that substantially limits a major life activity
  - Broad coverage under the ADA Amendments Act



- Curb Cut Effect
  - Everyone benefits from increased accessibility!



# Spoiler Alert!



## It's all about **EFFECTIVE COMMUNICATION!**

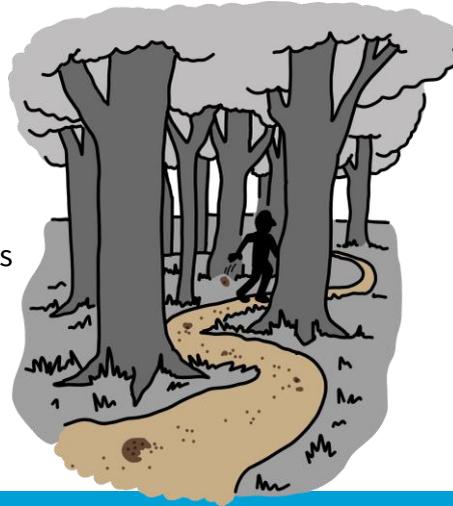
- As effective as
- Auxiliary Aids and Services
  - Qualified Interpreters and Readers
  - Braille and Large Print
  - Screen-reader compatibility
- Other Considerations
  - Nature
  - Length
  - Complexity
  - Context
- Primary Consideration



# ACA and Primary Consideration

## Following the Trail

- ACA told HHS to promulgate regs
- HHS regs incorporate certain Title II regs
- In determining what auxiliary aid or service, you must give primary consideration to the aid or services requested by the person with a disability
- Primary Consideration
  - Shall honor choice unless proof of other equally effective means or undue burden



# Auxiliary Aids and Services

- Common Ones
  - Interpreter
  - CART
  - Assistive Listening Devices
  - Braille
  - Large Print
  - Note taker
- VRI and writing notes are generally not favored in the Deaf community



# Prohibitions



- Don't require someone to bring another person to interpret or aid in communication
  - The law is clear that it is your obligation, not theirs
- Never use kids except real emergency circumstances!
- Person with disability might chose to use family/friend, but circumstances dictate whether it's a good idea or reasonable



# Companions

- **Family member, friend, or associate** of an individual seeking access to a service, program, or activity, who, along with such individual, is an **appropriate person** with whom the public entity **should communicate**.
- Examples
  - Parents of minors
  - Spouses/partners
  - HIPAA, 45 C.F.R. § 164.510



"Mrs. Cranley! You need to sign this HIPAA privacy form before the doctor can look at those warts on your stomach!"



## VRI Usually Stinks!

- VRI is often not equivalent because ASL is a **visual**, not an aural, language
- VRI must meet specific standards
  - Screen size, position
  - Portability during exam or through facility
  - Multiple speakers and/or Deaf folks make it difficult for everyone
  - Talk to interpreter rather than patient
  - Patient's inability to see screen well
    - Facial Expressions
    - Full body movements
    - Multiple things to see at once to convey full meaning
  - There may be other disability-related reasons that someone can't use VRI (cognitive)
- Effectiveness depends on the circumstances
- Writing is not much better



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## Telehealth for Deaf Folks

### Possibilities

- Remote interpreting services and/or CART on the same screen or platform
  - Use of accessibility services, such as remote interpreting and captioning, on a separate screen or device
    - Relay and typing as a last ditch effort
      - Relay operators are usually not qualified for medical settings
- <https://www.nad.org/covid19-telehealth-access-for-providers/>



### Best Practices

- Use accessibility services that are integrated rather than separate screens or devices
- Provide clear instructions to patient prior to use
  - Written English might not be effective
- Train staff to set up, use and trouble-shoot



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## Telehealth for Blind Folks

- System must accommodate screen readers, magnification and high-contrast software
  - Technology companies might not be covered by the ADA, but medical providers are
- Written materials must also be made accessible
  - Braille, audio, or digital formats
  - Reading the form
  - This includes, instructions on using telehealth and other portals



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- Reasonable accommodations can benefit everyone, regardless of disability
  - Help with forms
  - Reminders and summaries
  - Cancellation policies



## To Equity and Beyond

- One size does not fit all, especially with Telehealth
  - Variety of access to, understanding of, and concerns about technology
- Behaviors that might indicate the need for an accommodation
  - Missing things, often late, agitated, freezing



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# Communicating with People with Other Disabilities

- Generally
  - Be respectful
  - Listen and communicate back
  - Don't lie or pretend
- Cognitive Disabilities
  - Minimize distractions
  - Take your time
    - Repeat, explain, one question at a time
  - Might need to communicate in multiple ways
    - Writing, gestures, pointing at objects
- Psychiatric Disabilities
  - Acknowledge and be aware of the other person's reality
    - Fear, hallucinations, delusions, potential substance abuse
- Physical Disabilities
  - Ask to repeat if you don't understand
  - Nontraditional communication
    - Electronic or mechanical voice, communication boards or cards, body language
  - Be patient, don't try to rush or finish sentences



## Poll Question

**I learned...** (check all that apply)

- a) How to communicate in sign language
- b) That there are different ways to offer simple alternatives that can increase the effectiveness of communication
- c) That it is my legal obligation to offer auxiliary aides and services to patients with communication disabilities
- d) Nothing, I took a nap during the presentation.

## Disclaimer and Copyright Information

This presentation is intended solely for educational purposes and does not constitute legal advice or create an attorney-client relationship between you and the Colorado Cross-Disability Coalition Legal Program attorneys. The opinions expressed in this presentation are the opinions of the individual author and may not reflect the opinions of the Colorado Cross-Disability Coalition or the Colorado Cross-Disability Coalition Legal Program.

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### POLL QUESTION

On a scale of 1 to 5, (1 being not at all and 5 being very), how comfortable are you communicating about and for health equity?



QUESTIONS?

Type any questions into the chat box  
at the bottom of the screen.



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THANK YOU!

Please fill out the event evaluation here:  
[www.surveymonkey.com/r/HE2020-Event3](http://www.surveymonkey.com/r/HE2020-Event3)



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DON'T MISS THE REST OF THE SERIES!

**Final Event:**

Applying the Health Equity Lens: Serving People with Disabilities

Tuesday, October 13, 12:00-1:15PM MT / 1:00-2:15PM CT

Click [here](#) for more information and to register.

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**Recordings of Past Events:**

Online Archived CHAMPS Distance Learning Events:

[champsonline.org/events-trainings/distance-learning/online-archived-champs-distance-learning-events#:~:HE2020](http://champsonline.org/events-trainings/distance-learning/online-archived-champs-distance-learning-events#:~:HE2020)

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CCHN Webinar Archive:

[cchn.org/webinar-archive/](http://cchn.org/webinar-archive/)





# Disability Specific Communication

- **Communicating with Deaf People with Interpreters**
  - Do not speak “to” the interpreter, speak directly to the person who is Deaf in a normal tone.
  - If you speak in third person (i.e., “Tell her I think that is a good idea.”), the interpreter will sign exactly that. Instead say “That is a good idea.”
  - The interpreter will reflect you tone of voice and speed of speech.
  - ASL is NOT English.
    - ASL is a language completely different from English and has distinct:
      - Word order
        - In ASL you might say “Finish see movie?” rather than “Have you seen the movie yet?”
      - Grammar
      - Syntax
      - Humor
      - Idioms
        - “Train go sorry” loosely means “missed the boat.”
    - Fingerspelling uses English, not ASL.
  - ASL is a visual language.
- **Deaf Culture (note the capital “D”)**
  - People who are “Culturally Deaf” (note the capital “D”) consider American Sign Language (“ASL”) their native language.
    - One could be a hearing child of deaf parents and have their native language be ASL and be culturally Deaf.
  - Deaf culture is an insular culture, and there is a division between that community and others who may be hard of hearing or deaf.
- **Communicating with People who are Blind**
  - Be prepared to read short documents.
  - Be prepared to provide longer documents in alternative formats including Braille, email or other electronic format.
  - Use respectful language and tone.
- **Communicating with People with Intellectual Disabilities**
  - Speak in a way and tone that is appropriate for their chronological age.
  - They may have solutions to problems that you don’t.
  - They may have skills that you don’t.
    - E.g., they may be better with technology that you are.
  - They have perspective and experience that you don’t.
- **Communicating with People with Speech Disabilities**
  - What do you do when someone speaks to you and you don’t understand a thing that they said?

- NEVER pretend to understand when you don't because the person with the speech disability will know. Instead:
  - Say that you didn't understand and ask them to repeat themselves;
  - Relax—your ability to understand is directly proportional to your ability to relax;
  - Move to a quieter space;
  - Ask them to write their request if they can write;
  - See if you can understand a word or letter—you can usually understand “yes” or “no.”
- Ask if they use a communication board or device.
- Ask if they would like to use an office device if available.
- If someone is with them ask the person with the disability if it is ok for the third person to help.
  - After receiving permission treat the person like you would a sign language interpreter:
    - Remain in eye contact with the person with the disability;
    - Speak in first person directly to the person with the disability.
- **Communicating with People on the Autism Spectrum**
  - Some people on the spectrum prefer to be called “autistic” or “an autistic.”
    - If in doubt, ask the person!
  - Not everyone on the autism spectrum has an intellectual disability.
  - Not everyone with Asperger's Syndrome is a genius.
  - Some people with autism may present differently than neurotypical people (people without autism).
    - Don't make assumptions based on eye contact, how much or how little they speak.
    - Don't make assumptions based on tics like rocking, arm flapping, etc. This is often just a way of establishing where their body is in space.
  - Don't confuse inability to speak or discomfort with speaking with inability to articulate oneself.
  - Some people with autism prefer written communication.
    - You may want to communicate with them via text and email.
    - You may want to text and email even in face to face meetings.
- **Communicating with People with Psychiatric Disabilities**
  - Don't presume that they are not competent.
  - Don't assume that they also have an intellectual disability.
  - Don't assume that they are delusional.
  - If they are delusional this doesn't mean that they aren't accurate about certain things, and that they aren't smart or well educated.
- **Remember**
  - People with disabilities are more similar to you than they are dissimilar.
  - Everyone wants and deserves to be respected!

Link to Colorado Commission for the Deaf, Hard of Hearing and DeafBlind:

<https://ccdhh.com/index.php/risp/>

Link to Certified Interpreting Agencies:

<https://ccdhh.com/index.php/directory/>



## Signs that Someone Might Need Effective Communication Accommodations

You can make your job easier by recognizing that when people act in certain ways, there might be a reason. How you respond will define the success and effectiveness of the interaction.

FUNCTIONAL IMPAIRMENT	EXPRESSION	RESPONSE
<b>SHORT TERM MEMORY LOSS</b>	<ul style="list-style-type: none"> <li>• Frequent interruptions Asking questions repeatedly</li> <li>• Failure to follow through completely or one step of the process</li> <li>• May not remember previous phone calls or meetings and their content May not recognize who you are even though you have worked together before</li> </ul>	<ul style="list-style-type: none"> <li>• Offer to send email summary</li> <li>• Offer to work through step by step-break down if needed</li> <li>• Help person make a list of necessary tasks DO NOT scold person for interrupting (they know it comes across as obnoxious and tend to do this more when stressed)</li> <li>• Introduce yourself each time you have contact. Remind of content of previous meetings and why contact is being made in this instance.</li> </ul>

<p style="text-align: center;"><b>SEQUENCING</b></p>	<ul style="list-style-type: none"> <li>• Inability to see whole process and naturally figure out the steps Statements “what do I do now?” or “What is next?” when it appears obvious</li> <li>• Often results in gaps in product</li> <li>• Inability to set priorities</li> <li>• Person is stuck on a specific detail and will not let it go</li> </ul>	<ul style="list-style-type: none"> <li>• Spell out in bullets or numbers the steps to the process. If there is more than one form have them numbered or labeled and specify what to do when.</li> <li>• Gently ask for a time out and ask them to go to another issue without scolding or tell them that their issue is not important.</li> </ul>
<p style="text-align: center;"><b>FLOODING (OVERWHELM-SPECIFIC RESPONSE TO STIMULI)</b></p>	<ul style="list-style-type: none"> <li>• Inadequate OR long and convoluted response to simple question</li> <li>• Inability to focus with any distractions Irritability</li> <li>• Over-compensation on information</li> <li>• People either shut down or speed up and people might throw numerous questions</li> </ul>	<ul style="list-style-type: none"> <li>• Ask person if there is quiet space or better time to have discussion</li> <li>• Ask specific questions possibly in writing</li> <li>• Tell person I am having trouble keeping up with you – can we slow it down a bit</li> </ul>



COVID-19 is an emerging, rapidly evolving situation.

Get the latest public health information from CDC: <https://www.coronavirus.gov>

Get the latest research information from NIH: <https://www.nih.gov/coronavirus>

## Assistive Devices for People with Hearing, Voice, Speech, or Language Disorders

### On this page:

- ≡ [What are assistive devices?](#)
- ≡ [What types of assistive devices are available?](#)
- ≡ [What types of assistive listening devices are available?](#)
- ≡ [What types of augmentative and alternative communication devices are available for communicating face-to-face?](#)
- ≡ [What augmentative and alternative communication devices are available for communicating by telephone?](#)
- ≡ [What types of alerting devices are available?](#)
- ≡ [What research is being conducted on assistive technology?](#)
- ≡ [Where can I get more information?](#)

### What are assistive devices?

The terms *assistive device* or *assistive technology* can refer to any device that helps a person with hearing loss or a voice, speech, or language disorder to communicate. These terms often refer to devices that help a person to hear and understand what is being said more clearly or to express thoughts more easily. With the development of digital and wireless technologies, more and more devices are becoming available to help people with hearing, voice, speech, and language disorders communicate more meaningfully and participate more fully in their daily lives.

### What types of assistive devices are available?

Health professionals use a variety of names to describe assistive devices:

- ≡ **Assistive listening devices (ALDs)** help amplify the sounds you want to hear, especially where there's a lot of background noise. ALDs can be used with a hearing aid or cochlear implant to help a wearer hear certain sounds better.
- ≡ **Augmentative and alternative communication (AAC) devices** help people with communication disorders to express themselves. These devices can range from a simple picture

board to a computer program that synthesizes speech from text.

- ≡ **Alerting devices** connect to a doorbell, telephone, or alarm that emits a loud sound or blinking light to let someone with hearing loss know that an event is taking place.

## What types of assistive listening devices are available?

Several types of ALDs are available to improve sound transmission for people with hearing loss. Some are designed for large facilities such as classrooms, theaters, places of worship, and airports. Other types are intended for personal use in small settings and for one-on-one conversations. All can be used with or without hearing aids or a cochlear implant. ALD systems for large facilities include hearing loop systems, frequency-modulated (FM) systems, and infrared systems.

**Hearing loop (or induction loop) systems** use electromagnetic energy to transmit sound. A hearing loop system involves four parts:

- ≡ A sound source, such as a public address system, microphone, or home TV or telephone
- ≡ An amplifier
- ≡ A thin loop of wire that encircles a room or branches out beneath carpeting
- ≡ A receiver worn in the ears or as a headset

Amplified sound travels through the loop and creates an electromagnetic field that is picked up directly by a hearing loop receiver or a telecoil (see sidebar), a miniature wireless receiver that is built into many hearing aids and cochlear implants. To pick up the signal, a listener must be wearing the receiver and be within or near the loop. Because the sound is picked up directly by the receiver, the sound is much clearer, without as much of the competing background noise associated with many listening environments. Some loop systems are portable, making it possible for people with hearing loss to improve their listening environments, as needed, as they proceed with their daily activities. A hearing loop can be connected to a public address system, a television, or any other audio source. For those who don't have hearing aids with embedded telecoils, portable loop receivers are also available.

**FM systems** use radio signals to transmit amplified sounds. They are often used in classrooms, where the instructor wears a small microphone connected to a transmitter and the student wears the receiver, which is tuned to a specific frequency, or channel. People who have a telecoil inside their hearing aid or cochlear implant may also wear a wire around the neck (called a neckloop) or behind their aid or implant (called a silhouette inductor) to convert the signal into magnetic signals that can be picked up directly by the telecoil. FM systems can



**Hearing Loop**  
Switch hearing aid to T-coil

This logo informs people that a public area is looped.

Source: HearingLoop.org

### What's a telecoil?

A telecoil, also called a t-coil, is a coil of wire that is installed inside many hearing aids and cochlear implants to act as a miniature wireless receiver. It was originally designed to make sounds clearer to a listener over the telephone. It also is used with a variety of other assistive listening devices, such as hearing loop (or induction loop) systems, FM systems, infrared systems, and personal amplifiers.

transmit signals up to 300 feet and are able to be used in many public places. However, because radio signals are able to penetrate walls, listeners in one room may need to listen to a different channel than those in another room to avoid receiving mixed signals. Personal FM systems operate in the same way as larger scale systems and can be used to help people with hearing loss to follow one-on-one conversations.

**Infrared systems** use infrared light to transmit sound. A transmitter converts sound into a light signal and beams it to a receiver that is worn by a listener. The receiver decodes the infrared signal back to sound. As with FM systems, people whose hearing aids or cochlear implants have a telecoil may also wear a neckloop or silhouette inductor to convert the infrared signal into a magnetic signal, which can be picked up through their telecoil. Unlike induction loop or FM systems, the infrared signal cannot pass through walls, making it particularly useful in courtrooms, where confidential information is often discussed, and in buildings where competing signals can be a problem, such as classrooms or movie theaters. However, infrared systems cannot be used in environments with too many competing light sources, such as outdoors or in strongly lit rooms.

**Personal amplifiers** are useful in places in which the above systems are unavailable or when watching TV, being outdoors, or traveling in a car. About the size of a cell phone, these devices increase sound levels and reduce background noise for a listener. Some have directional microphones that can be angled toward a speaker or other source of sound. As with other ALDs, the amplified sound can be picked up by a receiver that the listener is wearing, either as a headset or as earbuds.

## What types of augmentative and alternative communication devices are available for communicating face-to-face?

The simplest AAC device is a picture board or touch screen that uses pictures or symbols of typical items and activities that make up a person's daily life. For example, a person might touch the image of a glass to ask for a drink. Many picture boards can be customized and expanded based on a person's age, education, occupation, and interests.

Keyboards, touch screens, and sometimes a person's limited speech may be used to communicate desired words. Some devices employ a text display. The display panel typically faces outward so that two people can exchange information while facing each other. Spelling and word prediction software can make it faster and easier to enter information.

Speech-generating devices go one step further by translating words or pictures into speech. Some models allow users to choose from several different voices, such as male or female, child or adult, and even some regional accents. Some devices employ a vocabulary of prerecorded words while

The telecoil works by receiving an electromagnetic signal from the hearing loop and then turning it back into sound within the hearing aid or cochlear implant. This process eliminates much of the distracting background noise and delivers sound customized for one's own need. For people who are hard-of-hearing who do not have a telecoil-equipped hearing aid or cochlear implant, loop receivers with headsets can provide similar benefits but without the customized or "corrected sound" feature that matches one's hearing loss pattern.

Many cochlear implants have a telecoil built into the sound processor, or can use an external telecoil accessory with both hearing aid compatible telephones and public loop systems. A simple switch or programming maneuver performed by the user activates this function.

See the NIDCD fact sheet [Hearing Aids \(https://www.nidcd.nih.gov/health/hearing-aids\)](https://www.nidcd.nih.gov/health/hearing-aids) for more information.

others have an unlimited vocabulary, synthesizing speech as words are typed in. Software programs that convert personal computers into speaking devices are also available.

## **What augmentative and alternative communication devices are available for communicating by telephone?**

For many years, people with hearing loss have used text telephone or telecommunications devices, called TTY or TDD machines, to communicate by phone. This same technology also benefits people with speech difficulties. A TTY machine consists of a typewriter keyboard that displays typed conversations onto a readout panel or printed on paper. Callers will either type messages to each other over the system or, if a call recipient does not have a TTY machine, use the national toll-free telecommunications relay service at 711 to communicate. (See [Telecommunications Relay Services \(https://www.nidcd.nih.gov/health/telecomm\)](https://www.nidcd.nih.gov/health/telecomm) for more information.) Through the relay service, a communications assistant serves as a bridge between two callers, reading typed messages aloud to the person with hearing while transcribing what's spoken into type for the person with hearing loss.

With today's new electronic communication devices, however, TTY machines have almost become a thing of the past. People can place phone calls through the telecommunications relay service using almost any device with a keypad, including a laptop, personal digital assistant, and cell phone. Text messaging has also become a popular method of communication, skipping the relay service altogether.

Another system uses voice recognition software and an extensive library of video clips depicting American Sign Language to translate a signer's words into text or computer-generated speech in real time. It is also able to translate spoken words back into sign language or text.

Finally, for people with mild to moderate hearing loss, captioned telephones allow you to carry on a spoken conversation, while providing a transcript of the other person's words on a readout panel or computer screen as back-up.

## **What types of alerting devices are available?**

Alerting or alarm devices use sound, light, vibrations, or a combination of these techniques to let someone know when a particular event is occurring. Clocks and wake-up alarm systems allow a person to choose to wake up to flashing lights, horns, or a gentle shaking.

Visual alert signalers monitor a variety of household devices and other sounds, such as doorbells and telephones. When the phone rings, the visual alert signaler will be activated and will vibrate or flash a light to let people know. In addition, remote receivers placed around the house can alert a person from any room. Portable vibrating pagers can let parents and caretakers know when a baby is crying. Some baby monitoring devices analyze a baby's cry and light up a picture to indicate if the baby sounds hungry, bored, or sleepy.

## **What research is being conducted on assistive technology?**

The National Institute on Deafness and Other Communication Disorders (NIDCD) funds research into several areas of assistive technology, such as those described below.

### **≡ Improved devices for people with hearing loss**

NIDCD-funded researchers are developing devices that help people with varying degrees of hearing loss communicate with others. One team has developed a portable device in which two or more users type messages to each other that can be displayed simultaneously in real time.

Another team is designing an ALD that amplifies and enhances speech for a group of individuals who are conversing in a noisy environment.

### ≡ **Improved devices for nonspeaking people**

#### ≡ **More natural synthesized speech**

NIDCD-sponsored scientists are also developing a personalized text-to-speech synthesis system that synthesizes speech that is more intelligible and natural sounding to be incorporated in speech-generating devices. Individuals who are at risk of losing their speaking ability can prerecord their own speech, which is then converted into their personal synthetic voice.

#### ≡ **Brain-computer interface research**

A relatively new and exciting area of study is called brain-computer interface research. NIDCD-funded scientists are studying how neural signals in a person's brain can be translated by a computer to help someone communicate. For example, people with amyotrophic lateral sclerosis (ALS, or Lou Gehrig's disease) or brainstem stroke lose their ability to move their arms, legs, or body. They can also become locked-in, where they are not able to express words, even though they are able to think and reason normally. By implanting electrodes on the brain's motor cortex, some researchers are studying how a person who is locked-in can control communication software and type out words simply by imagining the movement of his or her hand. Other researchers are attempting to develop a prosthetic device that will be able to translate a person's thoughts into synthesized words and sentences. Another group is developing a wireless device that monitors brain activity that is triggered by visual stimulation. In this way, people who are locked-in can call for help during an emergency by staring at a designated spot on the device

## **Where can I get more information?**

The NIDCD maintains a [directory of organizations \(https://www.nidcd.nih.gov/directory/\)](https://www.nidcd.nih.gov/directory/) that provide information on the normal and disordered processes of hearing, balance, taste, smell, voice, speech, and language.

Use the following keywords to help you search for organizations that can answer questions and provide printed or electronic information on assistive devices:

- ≡ [Assistive technology \(https://www.nidcd.nih.gov/directory/Bykeyword.aspx?key1=9\)](https://www.nidcd.nih.gov/directory/Bykeyword.aspx?key1=9)
- ≡ [Assistive listening device \(https://www.nidcd.nih.gov/directory/Bykeyword.aspx?key1=8\)](https://www.nidcd.nih.gov/directory/Bykeyword.aspx?key1=8)
- ≡ [Augmentative and alternative communication \(https://www.nidcd.nih.gov/directory/Bykeyword.aspx?key1=14\)](https://www.nidcd.nih.gov/directory/Bykeyword.aspx?key1=14)

For more information, contact us at:

### **NIDCD Information Clearinghouse**

1 Communication Avenue

Bethesda, MD 20892-3456

Toll-free voice: (800) 241-1044

Toll-free TTY: (800) 241-1055

Email: [nidcdinfo@nidcd.nih.gov](mailto:nidcdinfo@nidcd.nih.gov) (<mailto:nidcdinfo@nidcd.nih.gov>)

NIH Publication No. 11-7672

December 2011

\*Note: PDF files require a viewer such as the free [Adobe Reader](http://get.adobe.com/reader/)  (<http://get.adobe.com/reader/>).

**Last Updated Date:** November 12, 2019

### **Have a question?**

Information specialists can answer your questions in English or Spanish.

Voice: (800) 241-1044

TTY: (800) 241-1055

[nidcdinfo@nidcd.nih.gov](mailto:nidcdinfo@nidcd.nih.gov)

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# Example of a Policy and Procedure for Providing Auxiliary Aids for Persons with Disabilities

## AUXILIARY AIDS AND SERVICES FOR PERSONS WITH DISABILITIES

### POLICY:

**(Insert name of your facility)** will take appropriate steps to ensure that persons with disabilities, including persons who are deaf, hard of hearing, or blind, or who have other sensory or manual impairments, have an equal opportunity to participate in our services, activities, programs and other benefits. The procedures outlined below are intended to ensure effective communication with patients/clients involving their medical conditions, treatment, services and benefits. The procedures also apply to, among other types of communication, communication of information contained in important documents, including waivers of rights, consent to treatment forms, financial and insurance benefits forms, etc. **(include those documents applicable to your facility)**. All necessary auxiliary aids and services shall be provided without cost to the person being served.

All staff will be provided written notice of this policy and procedure, and staff that may have direct contact with individuals with disabilities will be trained in effective communication techniques, including the effective use of interpreters.

### PROCEDURES:

#### 1. Identification and assessment of need:

**(Name of facility)** provides notice of the availability of and procedure for requesting auxiliary aids and services through notices in our **(brochures, handbooks, letters, print/radio/television advertisements, etc.)** and through notices posted **(in waiting rooms, lobbies, etc.)**. When an individual self-identifies as a person with a disability that affects the ability to communicate or to access or manipulate written materials or requests an auxiliary aid or service, staff will consult with the individual to determine what aids or services are necessary to provide effective communication in particular situations.

#### 2. Provision of Auxiliary Aids and Services:

**(Insert name of your facility)** shall provide the following services or aids to achieve effective communication with persons with disabilities:

##### A. For Persons Who Are Deaf or Hard of Hearing

(i) For persons who are deaf/hard of hearing and who use sign language as their primary means of communication, the **(identify responsible staff person or position with a telephone number)** is responsible for providing effective interpretation or arranging for a qualified interpreter when needed.

In the event that an interpreter is needed, the **(identify responsible staff person)** is responsible for:

Maintaining a list of qualified interpreters on staff showing their names, phone numbers, qualifications and hours of availability **(provide the list)**;

Contacting the appropriate interpreter on staff to interpret, if one is available and qualified to interpret; or

Obtaining an outside interpreter if a qualified interpreter on staff is not available. **(Identify the agency(s) name with whom you have contracted or made arrangements)** has agreed to provide interpreter services. The agency's/agencies' telephone number(s) is/are **(insert number(s) and the hours of availability)**.

**Note: If video interpreter services are provided via computer, the procedures for accessing the service must be included.**

(ii) Communicating by Telephone with Persons Who Are Deaf or Hard of Hearing

**[Listed below are three methods for communicating over the telephone with persons who are deaf/hard of hearing. Select the method(s) to incorporate in your policy that best applies/apply to your facility.]**

**(Insert name of facility)** utilizes a Telecommunication Device for the Deaf (TDD) for external communication. The telephone number for the TDD is **(insert number)**. The TDD and instructions on how to operate it are located **(insert location)** in the facility; OR

**(Insert name of provider)** has made arrangements to share a TDD. When it is determined by staff that a TDD is needed, we contact **(identify the entity e.g., library, school or university, provide address and telephone numbers)**; OR

**(Insert name of facility)** utilizes relay services for external telephone with TTY users. We accept and make calls through a relay service. The state relay service number is **(insert telephone for your State Relay)**.

(iii) For the following auxiliary aids and services, staff will contact **(responsible staff person or position and telephone number)**, who is responsible to provide the aids and services in a timely manner:

Note-takers; computer-aided transcription services; telephone handset amplifiers; written copies of oral announcements; assistive listening devices; assistive listening systems; telephones compatible with hearing aids; closed caption decoders; open and closed captioning; telecommunications devices for deaf persons (TDDs); videotext displays; or other effective methods that help make aurally delivered materials available to individuals who are deaf or hard of hearing.

(iv) Some persons who are deaf or hard of hearing may prefer or request to use a family member or friend as an interpreter. However, family members or friends of the person will not be used as interpreters unless specifically requested by that individual and after an offer of an interpreter at no charge to the person has been made by the facility. Such an offer and the response will be documented in the person's file. If the person chooses to use a family member or friend as an interpreter, issues of competency of interpretation, confidentiality, privacy and conflict of interest will be considered. If the family member or friend is not competent or appropriate for any of these reasons, competent interpreter services will be provided.

**NOTE: Children and other residents will not be used to interpret, in order to ensure confidentiality of information and accurate communication.**

B. For Persons Who are Blind or Who Have Low Vision

(i) Staff will communicate information contained in written materials concerning treatment, benefits, services, waivers of rights, and consent to treatment forms by reading out loud and explaining these forms to persons who are blind or who have low vision **[in addition to reading, this section should tell what other aids are available, where they are located, and how they are used]**.

The following types of large print, taped, Braille, and electronically formatted materials are available: **(description of the materials available)**. These materials may be obtained by calling **(name or position and telephone number)**.

(ii) For the following auxiliary aids and services, staff will contact **(responsible staff person or position and telephone number)**, who is responsible to provide the aids and services in a timely manner:

Qualified readers; reformatting into large print; taping or recording of print materials not available in alternate format; or other effective methods that help make visually delivered materials available to individuals who are blind or who have low vision. In addition, staff are available to assist persons who are blind or who have low vision in filling out forms and in otherwise providing information in a written format.

C. For Persons With Speech Impairments

To ensure effective communication with persons with speech impairments, staff will contact **(responsible staff person or position and telephone number)**, who is responsible to provide the aids and services in a timely manner:

Writing materials; typewriters; TDDs; computers; flashcards; alphabet boards; communication boards; **(include those aids applicable to your facility)** and other communication aids.

D. For Persons With Manual Impairments

Staff will assist those who have difficulty in manipulating print materials by holding the materials and turning pages as needed, or by providing one

or more of the following:

Note-takers; computer-aided transcription services; speaker phones; or other effective methods that help to ensure effective communication by individuals with manual impairments. For these and other auxiliary aids and services, staff will contact (**responsible staff person or position and telephone number**) who is responsible to provide the aids and services in a timely manner.

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# Introduction to Web Accessibility

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Translations

## Introduction



Most people today can hardly conceive of life without the internet. It provides access to news, email, shopping, and entertainment, at any hour of the day or night. Some have argued that no other single invention has been more revolutionary since Gutenberg's printing press in the 1400s. Now, at the click of a mouse, the world can be "at your fingertips"—that is, if you can use a mouse... and see the screen... and hear the audio—in other words, if you don't have a disability of any kind.

This introduction should help you understand how people with disabilities use the web, the frustrations they feel when they cannot access the web, and what you can do to make your sites more accessible.

### **The Web Offers Unprecedented Opportunities**



The internet is one of the best things that ever happened to people with disabilities. You may not have thought about it that way, but all you have to do is think back to the days before the internet to see why this is so. For example, before the internet, how did blind people read newspapers? They mostly didn't. Audiotapes or Braille printouts were expensive - a Braille version of the Sunday New York Times would be too bulky to be practical. At best, they could ask a family member or friend to read the newspaper to them. This method works, but it makes blind people dependent upon others.



Most newspapers now publish their content online in a format that has the potential to be read by "screen readers" used by the blind. These software programs read electronic text out loud so that blind people can use computers and access any text content through the computer. Suddenly, blind people don't have to rely on other people to read the newspaper to them. They don't have to wait for expensive audio tapes or expensive, bulky Braille printouts. They simply open a web browser and listen as their screen reader reads the newspaper to them, and they do it when they want to and as soon as the content is published.



Similarly, people with motor disabilities who cannot pick up a newspaper or turn its pages can access online newspapers through their computer, using certain assistive technologies that adapt the computer interface to their own disabilities. Sometimes the adaptations are simple, such as having the person place a stick in the mouth and use it to type keyboard commands. In other cases, the adaptations are more sophisticated, as in the use of special keyboards or eye-tracking software that allows

people to use a computer with nothing more than eye movements. People who are deaf always had the possibility of reading newspapers on their own, so it may seem that the internet does not offer the same type of emancipation that it does to those who are blind or to those with motor disabilities, but they can read online transcripts of important speeches or view multimedia content that has been fully captioned. Many people with cognitive disabilities can also benefit greatly from the structure and flexibility of web content.

## Falling Short of the Web's Potential



Despite the web's great potential for people with disabilities, this potential is still largely unrealized. For example, some sites can only be navigated using a mouse, and only a very small percentage of video or multimedia content has been captioned for the Deaf. What if the internet content is only accessible by using a mouse? What do people do if they can't use a mouse? And what if web developers use graphics instead of text? If screen readers can only read text, how would they read the graphics to people who are blind?

As soon as you start asking these types of questions, you begin to see that there are a few potential glitches in the accessibility of the internet to people with disabilities. The internet has the potential to revolutionize disability access to information, but if we're not careful, we can place obstacles along the way that destroy that potential and which leave people with disabilities just as discouraged and dependent upon others as before.

## People with Disabilities on the Web

Though estimates vary, most studies find that about one fifth (20%) of the population has some kind of disability. Not all of these people have disabilities that make it difficult for them to access the internet, but it is still a significant portion of the population. Businesses would be unwise to purposely exclude 20, 10, or even 5 percent of their potential customers from their web sites. For schools, universities, and government entities it would not only be unwise, but in many cases, it would also break the law.

### Important

The major categories of disability types are:



#### [Visual](#)

Blindness, low vision, color-blindness



#### [Hearing](#)

Deafness



### Motor

Inability to use a mouse, slow response time, limited fine motor control



### Cognitive

Learning disabilities, distractibility, inability to remember or focus on large amounts of information

Each of the major categories of disabilities requires certain types of adaptations in the design of the web content. Most of the time, these adaptations benefit nearly everyone, not just people with disabilities. Almost everyone benefits from helpful illustrations, properly-organized content and clear navigation. Similarly, while captions are a necessity for Deaf users, they can be helpful to others, including anyone who views a video without audio.

## Keeping Web Accessibility in Mind



Gain an appreciation of web accessibility by

understanding the user perspective. This 11.5 minute video provides an overview of the difficulties users with disabilities face on the web and some of the motivations for web accessibility. Please select from the following options:

-  [Windows Media](#)
-  [Flash](#)
-  [Transcript](#)
-  [Texto en Español](#) (traducción cortesía de la Fundación Sidar. [www.sidar.org](http://www.sidar.org))

[Download Windows Media Player- external link](#) | [Download Adobe Flash player- external link](#)

## Experiences of Students with Disabilities



The students in the following video share some of their experiences with the web and accessibility. Please select from the following options:

-  [Windows Media](#)
-  [Quicktime](#)
-  [Transcript](#)

[Download Windows Media Player- external link](#) | [Download Quicktime- external link](#)

## Implementing Web Accessibility

Before anyone can make their web site accessible, they must understand accessibility, be committed to ensuring accessibility, learn how to implement accessibility, and understand their legal obligations.

### Commitment and accountability

**Awareness.** The foundation of any kind of commitment to web accessibility is awareness of the issues. Most web developers are not opposed to the concept of making the internet accessible to people with disabilities. Most accessibility errors on web sites are the result of lack of awareness, rather than malice or apathy.

**Leadership.** Understanding the issues is an important first step, but it does not solve the problem, especially in large organizations. If the leadership of an organization does not express commitment to web accessibility, chances are low that the organization's web content will be accessible. Oftentimes, a handful of developers make their own content accessible while the majority don't bother to, since it is not expected of them.

**Policies and Procedures.** Even when leaders express their commitment to an idea, if the idea is not backed up by policy, the idea tends to get lost among the day-to-day routines. The best approach for a large organization is to [create an internal policy](#) that outlines specific standards, procedures, and methods for monitoring compliance.

### Training and technical support

Sometimes web developers fear that it is more expensive and time-consuming to create accessible web sites than it is to create inaccessible ones. This fear is largely untrue. The benefits of providing access to a larger population almost always outweigh the time required by a knowledgeable developer to implement that accessibility.

A developer can learn the basics of web accessibility in just a few days, but, as with any technical skill, it often takes months to internalize the mind set as well as the techniques. Online resources, such as the WebAIM [email discussion list](#), [forums](#), [monthly newsletter](#), and [CD-based accessibility guide](#) provide relevant resources for administrators, webmasters, and developers. There are many professionals that can help your organization ensure high accessibility. WebAIM offers [onsite training](#), [consulting & technical assistance](#), accessible site [design](#), and [other services](#).

## Laws and standards

If you live in the United States, applicable laws include [ADA](#), [IDEA](#), and the [Rehabilitation Act](#) of 1973 (Sections 504 and [Section 508](#)). Many [international laws](#) also address accessibility.

The [Web Content Accessibility Guidelines](#) provide an international set of guidelines. They are developed by the Worldwide Web Consortium (W3C), the governing body of the web. These guidelines are the basis of most web accessibility law in the world. Version 2.0 of these guidelines, published in December 2008, are based on four principles:

- [Perceivable](#): Available to the senses (vision and hearing primarily) either through the browser or through assistive technologies (e.g. screen readers, screen enlargers, etc.)
- [Operable](#): Users can interact with all controls and interactive elements using either the mouse, keyboard, or an assistive device.
- [Understandable](#): Content is clear and limits confusion and ambiguity.
- [Robust](#): A wide range of technologies (including old and new user agents and assistive technologies) can access the content.

These first letters of these four principles spell the word POUR. This may help you remember them.

- [Read more about WCAG 1.0 and 2 .0](#)
- [Read more on the principles of WCAG 2.0](#)

## Principles of Accessible Design

Below you will find a list of some key principles of accessible design. Most accessibility principles can be implemented very easily and will not impact the overall "look and feel" of your web site.

### [Provide appropriate alternative text](#)

Alternative text provides a textual alternative to non-text content in web pages. It is especially helpful for people who are blind and rely on a screen reader to have the content of the website read to them.

### [Provide headings for data tables](#)

Tables are used online for layout and to organize data. Tables that are used to organize tabular data should have appropriate table headers (the <th> element). Data cells should be associated with their appropriate headers, making it easier for screen reader users to navigate and understand the data table.

### [Ensure users can complete and submit all forms](#)

Ensure that every form element (text field, checkbox, dropdown list, etc.) has a label and make sure that label is associated to the correct form element using the <label> tag. Also make sure the user can [submit the form and recover from any errors](#), such as the failure to fill in all required fields.

### [Ensure links make sense out of context](#)

Every link should make sense if the link text is read by itself. Screen reader users may choose to read only the links on a web page. Certain phrases like "click here" and "more" must be avoided.

### [Caption and/or provide transcripts for media](#)

Videos and live audio must have captions and a transcript. With archived audio, a transcription may be sufficient.

Ensure accessibility of non-HTML content, including [PDF files](#), [Microsoft Word documents](#), [PowerPoint presentations](#) and [Adobe Flash content](#).

In addition to all of the other principles listed here, PDF documents and other non-HTML content must be as accessible as possible. If you cannot make it accessible, consider using HTML instead or, at the very least, provide an accessible alternative. PDF documents should also include a series of tags to make it more accessible. A tagged PDF file looks the same, but it is almost always more accessible to a person using a screen reader.

### [Allow users to skip repetitive elements on the page](#)

You should provide a method that allows users to skip navigation or other elements that repeat on every page. This is usually accomplished by providing a "Skip to Content," "Skip to Main Content," or "Skip Navigation" link at the top of the page which jumps to the main content of the page.

### [Do not rely on color alone to convey meaning](#)

The use of color can enhance comprehension, but do not use color alone to convey information. That information may not be available to a person who is colorblind and will be unavailable to screen reader users.

### [Make sure content is clearly written and easy to read](#)

There are many ways to make your content easier to understand. Write clearly, [use clear fonts](#), and [use headings and lists appropriately](#).

### [Make JavaScript accessible](#)

Ensure that [JavaScript event handlers](#) are device independent (e.g., they do not require the use of a mouse) and make sure that your page does not rely on JavaScript to function.

### [Design to standards](#)

HTML compliant and accessible pages are more robust and provide better search engine optimization. [Cascading Style Sheets](#) (CSS) allow you to separate content from presentation. This provides more flexibility and accessibility of your content.

This list does not present all accessibility issues, but by addressing these basic principles, you will ensure greater accessibility of your web content to everyone. You can learn more about accessibility by browsing our [articles](#) and [resources](#).

## Conclusion

The web offers so many opportunities to people with disabilities that are unavailable through any other medium. It offers independence and freedom. However, if a web site is not created with web accessibility in mind, it may exclude a segment of the population that stands to gain the most from the internet. Most people do not intend to exclude people with disabilities. As organizations and designers become aware of and implement accessibility, they will ensure that their content can be accessed by a broader population.

## See also:

- [Constructing a POUR \(Perceivable, Operable, Understandable, Robust\) Website](#)
- [Visual](#)
- [Hearing](#)
- [Motor](#)
- [Cognitive](#)
- [Seizure](#)
- [Design Considerations](#)

# PDF Accessibility Checklist

ID	Requirements	Result
AA1	Document file name should not contain any spaces or special characters.	
AA2	Document file name needs to be concise, generally limited to 20-30 characters and should clarify the contents of the file.	
AA3	All Document properties should be filled out: Title, Author, (an HHS OpDiv, StaffDiv, or Program Office--not an individual's names) Subject, and Keywords	
AA4	Use electronic version for any signatures.	

The checklist below, a series of tables, is based on the content of the PDF. Acceptable answers are: Yes, No, or N/A. If 'No' is the answer to any item, then the document is not 508 compliant.

## Section A: All PDFs

These checks should be performed on all PDFs no matter of what is present in the actual content:

ID	Requirements	Traceability to 508	Result
A1	Is the PDF tagged?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
A2	Is the Document Title filled out in the Document Properties?	<a href="#">WCAG 2.0 Success criterion 2.4.2</a> 	
A3	Is the correct language of the document set?	<a href="#">WCAG 2.0 Success</a>	

ID	Requirements	Traceability to 508	Result
		<a href="#">criterion 3.1.1</a> 	
A4	Did the PDF fully pass the Adobe Accessibility Checker?	<a href="#">WCAG 2.0 Success Criterion 4.1.1</a> 	
A5	Is the document free from content that flashes more than 3 times per second?	<a href="#">WCAG 2.0 Success Criterion 2.3.1</a> 	
A6	Are accurate bookmarks provided for documents greater than 9 pages?	<a href="#">WCAG 2.0 Success Criterion 2.4.5</a> 	
A7	Is the document free from review-related content carried over from Office or other editing tools such as comments, track changes, embedded Speaker Notes?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
A8	Is the order in the tag structure accurate and logical? Do the tags match the order they should be read in?	<a href="#">WCAG 2.0 Success Criterion 1.3.2</a> 	
A9	Is all informational content contained in the tag structure?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
A10	Are all non-standard tags appropriately mapped to standard Adobe tags?	<a href="#">WCAG 2.0 Success Criterion 4.1.2</a> 	

ID	Requirements	Traceability to 508	Result
A11	Is all the text within the tags correctly formatted? (Free from line breaks and split words) <a href="#">Learn more about finding and fixing backend text errors.</a>	<a href="#">WCAG 2.0 Success Criterion 4.1.1</a> 	
A12	Do paragraph tags accurately represent visual paragraphs?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
A13	Can text be resized and considered readable when magnified to 200%?	<a href="#">WCAG 2.0 Success Criterion 1.4.4</a> 	

## Section B: PDFs containing Color

ID	Requirements	Traceability to 508	Result
B1	Is information conveyed by methods other than color alone?	<a href="#">WCAG 2.0 Success Criterion 1.4.1</a> 	
B2	Does all text (with the exception of logos) have a contrast ratio of 4.5:1 or greater no matter the size?	<a href="#">WCAG 2.0 Success Criterion 1.4.3</a>  . (Size stipulation not considered by HHS)	

## Section C: PDFs containing Links

ID	Requirements	Traceability to 508	Result
C1	Are links tagged correctly in the tag structure? (Contain visual link text and link OBJR within the Link tag)	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a>	
C2	Are links distinguished by a method other than color?	<a href="#">WCAG 2.0 Success Criterion 1.4.1</a>	
C3	Can all link text be understood out of context? If not, does generic link have sufficient context?	<a href="#">WCAG 2.0 Success Criterion 2.4.4</a>	

## Section D: PDFs containing Images

ID	Requirements	Traceability to 508	Result
D1	Are all images conveying information tagged as figures and included in the tag structure?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a>	
D2	Do all images conveying information have alt text that provides the same level of understanding a visual user would gain?	<a href="#">WCAG 2.0 Success Criterion 1.1.1</a>	
D3	Are all decorative images tagged as artifact/background?	<a href="#">WCAG 2.0 Success Criterion 1.1.1</a>	
D4	Do complex images have an alternate accessible means of understanding?	<a href="#">WCAG 2.0 Success</a>	

ID	Requirements	Traceability to 508	Result
		<a href="#">Criterion 1.1.1</a> 	
D5	Is the document free from images of text? (Picture of an informational table, screenshot of text from another source, etc.)	<a href="#">WCAG 2.0 Success Criterion 1.4.5</a> 	
D6	Are groups of related images tagged in a way assistive technology users would understand?	<a href="#">WCAG 2.0 Success Criterion 1.1.1</a> 	

## Section E: PDFs containing Tables

ID	Requirements	Traceability to 508	Result
E1	Does the document use table tags only for data tables?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
E2	Does the table structure in the tag tree match the visual table layout?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
E3	Are all header cells tagged with the TH tag? Are all data cells tagged with the TD tag?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
E4	Do all Header cells contain text?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	

ID	Requirements	Traceability to 508	Result
E5	Are merged cells correctly spanned with Colspan and/or Rowspan?	<a href="#">WCAG 2.0 Success Criterion 1.3.1.</a> 	
E6	Do data tables with 1 set of both column and row headers appropriately use scope to associate to data cells?	<a href="#">WCAG 2.0 Success Criterion 1.3.1.</a> 	
E7	Do data tables with more than 1 set of column and/or row headers appropriately use id/headers to associate to data cells?	<a href="#">WCAG 2.0 Success Criterion 1.3.1.</a> 	

## Section F: PDFs containing Lists

ID	Requirements	Traceability to 508	Result
F1	Are all visual lists tagged correctly with the List, List Item (LI), and LBody tags?	<a href="#">WCAG 2.0 Success Criterion 1.3.1.</a> 	
F2	Does the number of items in the tag structure match the number of items in the visual list?	<a href="#">WCAG 2.0 Success Criterion 1.3.1.</a> 	
F3	Are nested lists appropriately nested in the tag structure?	<a href="#">WCAG 2.0 Success Criterion 1.3.1.</a> 	

## Section G: PDFs containing Headings

ID	Requirements	Traceability to 508	Result
G1	Is text intended to act as a visual heading tagged with the heading tags (H1 through H6)?	<a href="#">WCAG 2.0 Success Criterion 1.3.1.</a> 	
G2	Do heading tags follow a logical hierarchical progression? (Do not skip heading levels)	<a href="#">WCAG 2.0 Success Criterion 1.3.1.</a> 	
G3	Are heading tags used only on text that defines a section of content?	<a href="#">WCAG 2.0 Success Criterion 1.3.1.</a> 	
G4	Does the Heading text accurately describe the sectional content?	<a href="#">WCAG 2.0 Success Criterion 2.4.6</a> 	

### Section H: PDFs containing Forms

ID	Requirements	Traceability to 508	Result
H1	Are all form fields correctly tagged?	<a href="#">WCAG 2.0 Success Criterion 3.3.2</a> 	
H2	Do all form fields contain understandable labels and tooltips?	<a href="#">WCAG 2.0 Success Criterion 3.3.2</a> 	
H3	Do tooltips contain all formatting requirements that will be automatically flagged as an error?	<a href="#">WCAG 2.0 Success</a>	

ID	Requirements	Traceability to 508	Result
		<a href="#">Criterion 3.3.2</a> 	
H4	Are required fields programmatically set?	<a href="#">WCAG 2.0 Success Criterion 3.3.1</a> 	
H5	Is the tab order of the form fields logical?	<a href="#">WCAG 2.0 Success Criterion 1.3.2</a> 	

## Section i: PDFs containing other common elements

ID	Requirements	Traceability to 508	Result
i1	Is any nonstandard text (glyph) tagged in an accessible manner?	<a href="#">WCAG 2.0 Success Criterion 1.1.1</a> 	
i2	Was OCR successfully performed on a scanned image document?	<a href="#">WCAG 2.0 Success Criterion 1.4.5</a> 	
i3	Was the language appropriately set for all foreign words or phrases?	<a href="#">WCAG 2.0 Success Criterion 3.1.2</a> 	
i4	Is the table of contents tagged with appropriate tags? (TOC, TOC Item (TOCI))	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	

ID	Requirements	Traceability to 508	Result
i5	Are all internal links/TOC entries functioning correctly (if linked)?	<a href="#">WCAG 2.0 Success Criterion 2.4.5.</a> 	
i6	Are citations and footnotes/endnotes tagged with appropriate tags? (Reference, Note)	<a href="#">WCAG 2.0 Success Criterion 1.3.1.</a> 	

Checklist obtained from: <https://www.hhs.gov/web/section-508/making-files-accessible/checklist/pdf/index.html>

# Word Accessibility Checklist

ID	1.0.Master Requirements for all Documents	Yes (Pass)	No (Fail)	N/A
1.1	Does the document file name not contain spaces and/or special characters?			
1.2	Is the document file name concise, generally limited to 20-30 characters, and does it make the contents of the file clear?			
1.3	Have the Document Properties for Title, Author, Subject (AKA Description), Keywords, Language, and Copyright Status been applied per HHS guidance?			
1.4	Does the document utilize recommended fonts (i.e., Times New Roman, Verdana, Arial, Tahoma, Helvetica, or Calibri)?			
1.5	Have track changes been accepted or rejected and turned off?			
1.6	Have comments been removed and formatting marks been turned off?			
1.7	Does the document refrain from using flashing/flickering text and/or animated text?			
1.8	Is the document free of background images or watermarks?			
1.9	Do all images, grouped images, and nontext elements that convey information have meaningful alternative-text descriptions?			

1.10	Do complex images (i.e., charts and graphs) have descriptive text near the image (perhaps as a caption)?			
1.11	Do all URLs contain descriptive hyperlinks (i.e., avoid generic phrases like “Click here” and, instead, use phrases that let users know about the content of the linked page prior to selecting it)?			
1.12	Are all URLs linked to correct Web destinations?			
1.13	Are e-mail links accessible?			
1.14	Has a separate accessible version of the document been provided when there is no other way to make the content accessible?			
1.15	If there are tables, are blank cells avoided?			
1.16	Is all of the text easy to read in comparison to the background of the document (i.e., has a color-contrast ratio of 4.5:1)?			
1.17	Has the document been reviewed in Print Preview for a final visual check?			
<b>ID</b>	<b>2.0. General Layout and Formatting Requirements</b>	<b>Yes (Pass)</b>	<b>No (Fail)</b>	<b>N/A</b>
2.1	Has the document been formatted using Style elements (Heading 1, Heading 2) and/or Outline in a hierarchical manner (i.e. Heading 1 to Heading 2 to Body Text)?			
2.2	Are page numbering codes used as opposed to manually typed page numbers?			

2.3	If footnotes are present, have they been created through Word Footnote linking?			
2.4	If color is used to emphasize the importance of selected text, is there an alternate method also used?			
2.5	Is the list style being used as opposed to manually typed characters (e.g. Hyphens, numbers, or graphics)?			
2.6	Is the document free of text boxes? (If not, but the final format will be PDF or HTML, then text boxes are okay).			
2.7	If the document contains a Table of Contents (TOC), was it created using the TOC field (e.g., created using the TOC Command in MS Word)?			
<b>ID</b>	<b>3.0. Document Image Requirements</b>	<b>Yes (Pass)</b>	<b>No (Fail)</b>	<b>N/A</b>
3.1	Are multiple associated images on the same page (e.g., boxes in an organizational chart) grouped as one object?			
3.2	Have all multilayered objects been flattened into one image and does that image use one alternative text description for the image?			
3.3	Do images/graphics appear crisp and legible?			
<b>ID</b>	<b>4.0. Document Table Requirements</b>	<b>Yes (Pass)</b>	<b>No (Fail)</b>	<b>N/A</b>
4.1	If the document has a tabular appearance, was the tabular structure made using the Insert Table option (as opposed to manual tabs and/or spaces)?			

4.2	Do all tables have a logical reading order from left to right, top to bottom?			
4.3	Do data tables have the entire first row designated as a 'Header Row' in table properties?			
4.4	Is the table free of Merged Cells? (If not, but the final format will be PDF or HTML, then merged cells are okay).			
4.5	Are all tables described and labeled (where appropriate)? Note: In some cases naming/numbering of tables may not be appropriate. For example, a small data table in a presentation may not need a reference.			
4.6	In table properties, is "Allow row to break across pages" unchecked?			

Checklist obtained from: <https://www.hhs.gov/web/section-508/making-files-accessible/checklist/word/index.html>

# Excel Accessibility Checklist

ID	1.0.Master Requirements for all Documents	Yes (Pass)	No (Fail)	N/A
1.1	Does the document file name not contain spaces and/or special characters?			
1.2	Is the document file name concise, generally limited to 20-30 characters, and does it make the contents of the file clear?			
1.3	Have the Document Properties for Title, Author, Subject (AKA Description), Keywords, Language, and Copyright Status been applied per HHS guidance?			
1.4	Does the document utilize recommended fonts (i.e., Times New Roman, Verdana, Arial, Tahoma, Helvetica, or Calibri)?			
1.5	Have track changes been accepted or rejected and turned off?			
1.6	Have comments been removed and formatting marks been turned off?			
1.7	Does the document refrain from using flashing/flickering text and/or animated text?			
1.8	Is the document free of background images or watermarks?			
1.9	Do all images, grouped images, and nontext elements that convey information have meaningful alternative-text descriptions?			
1.10	Do complex images (i.e., charts and graphs) have descriptive text near the image (perhaps as a caption)?			

1.11	Do all URLs contain descriptive hyperlinks (i.e., avoid generic phrases like “Click here” and, instead, use phrases that let users know about the content of the linked page prior to selecting it)?			
1.12	Are all URLs linked to correct Web destinations?			
1.13	Are e-mail links accessible?			
1.14	Has a separate accessible version of the document been provided when there is no other way to make the content accessible?			
1.15	If there are tables, are blank cells avoided?			
1.16	Is all of the text easy to read in comparison to the background of the document (i.e., has a color-contrast ratio of 4.5:1)?			
1.17	Has the document been reviewed in Print Preview for a final visual check?			

ID	2.0. General Layout and Formatting Requirements	Yes (Pass)	No (Fail)	N/A
2.1	Is the table free of merged cells? (If not, but the final format will be PDF or HTML, then merged cells are okay).			
2.2	Do the active worksheets have clear and concise names that allow users (and assistive technology) to identify the table’s source and content?			
2.3	Is each table prefixed (titled) with the table name and table number?			
2.4	Does the table header repeat at the top of the table as it goes from one page to another?			

2.5	If color is used to emphasize important text, is there is an alternate, compliant method used as well?			
2.6	Have all extraneous comments have been removed?			
2.7	Is the document free of text boxes? (If not, but the final format will be PDF or HTML, then text boxes are okay).			

ID	3.0. Charts/Image Requirements	Yes (Pass)	No (Fail)	N/A
3.1	Are associated images on the same page, such as boxes in an organizational chart, grouped as one object?			
3.2	Have all multilayered objects been flattened into one image?			
3.3	Do all nontext elements that convey information, including images, have descriptive captions (alternative text does not currently work in Excel)?			
3.4	Do all charts have titles, legends, and axis labels?			

Checklist obtained from: <https://www.hhs.gov/web/section-508/making-files-accessible/checklist/excel/index.html>

# PowerPoint Accessibility Checklist

ID	1.0.Master Requirements for all Documents	Yes (Pass)	No (Fail)	N/A
1.1	Does the document file name not contain spaces and/or special characters?			
1.2	Is the document file name concise, generally limited to 20–30 characters, and does it make the contents of the file clear?			
1.3	Have the Document Properties for Title, Author, Subject (AKA Description), Keywords, Language, and Copyright Status been applied per HHS guidance?			
1.4	Does the document utilize recommended fonts (i.e., Times New Roman, Verdana, Arial, Tahoma, Helvetica, or Calibri)?			
1.5	Have track changes been accepted or rejected and turned off?			
1.6	Have comments been removed and formatting marks been turned off?			
1.7	Does the document refrain from using flashing/flickering text and/or animated text?			
1.8	Is the document free of background images or watermarks?			
1.9	Do all images, grouped images, and nontext elements that convey information have meaningful alternative-text descriptions?			
1.10	Do complex images (i.e., charts and graphs) have descriptive text near the image (perhaps as a caption)?			

1.11	Do all URLs contain descriptive hyperlinks (i.e., avoid generic phrases like “Click here” and, instead, use phrases that let users know about the content of the linked page prior to selecting it			
1.12	Are all URLs linked to correct Web destinations?			
1.13	Are e-mail links accessible?			
1.14	Has a separate accessible version of the document been provided when there is no other way to make the content accessible?			
1.15	If there are tables, are blank cells avoided?			
1.16	Is all of the text easy to read in comparison to the background of the document (i.e., has a color-contrast ratio of 4.5:1)?			
1.17	Has the document been reviewed in Print Preview for a final visual check?			

<b>ID</b>	<b>2.0. General Layout and Formatting Requirements</b>	<b>Yes (Pass)</b>	<b>No (Fail)</b>	<b>N/A</b>
2.1	Can all slide text be viewed in the Outline View?			
2.2	Do all of the slides avoid using flickering/flashing text and/or animated text?			
2.3	Do all of the slides avoid using text boxes or graphics with text within them?			
2.4	Is the list style being used as opposed to manually typed characters (e.g. Hyphens, numbers, or graphics)?			

2.5	If multimedia is present, did the multimedia pass the Multimedia Checklist?			
2.6	Is the presentation free of SmartArt?			

<b>ID</b>	<b>3.0. Document Images Requirement</b>	<b>Yes (Pass)</b>	<b>No (Fail)</b>	<b>N/A</b>
3.1	Are multiple associated images on the same page (e.g., boxes in an organizational chart) grouped as one object?			
3.2	Have all multilayered objects been flattened into one image and does that image use one alternative text description for the image?			
3.3	Do images/graphics appear crisp and legible?			

<b>ID</b>	<b>4.0. Document Tables</b>	<b>Yes (Pass)</b>	<b>No (Fail)</b>	<b>N/A</b>
4.1	If the document (or a section of the document) has a tabular appearance, is the tabular structure made using the table option (as opposed to manual tabs and/or spaces)?			
4.2	Do all tables have a logical reading order from left to right, top to bottom?			
4.3	Do data tables have the entire first row designated as a 'Header Row' in table properties?			
4.4	Is the table free of merged cells?			

4.5	Are all tables described and labeled (where appropriate)? Note: In some cases naming/numbering of tables may not be appropriate. For example, a small data table in a presentation may not need a reference.			
4.6	In table properties, is "Allow row to break across pages" unchecked?			

Checklist obtained from: <https://www.hhs.gov/web/section-508/making-files-accessible/checklist/ppt/index.html>

# HTML Accessibility Checklist

This checklist is based on the [WCAG 2.0 requirements](#). The checklist below, a series of tables, is based on the content of the Web page/Site. If 'No' is answered to any item, then the site is not 508 compliant.

## Section A: General Visual Checks

ID	Requirements	Traceability back to 508	Result
A1	Is the site free from content that flashes more than 3 times per second?	<a href="#">WCAG 2.0 Success Criterion 2.3.1</a> 	
A2	Can all text be resized up to 200% without degrading quality/understandability?	<a href="#">WCAG 2.0 Success Criterion 1.4.4</a> 	
A3	Is there more than one way to locate a web page? (Site Search, Site Map, etc.)	<a href="#">WCAG 2.0 Success Criterion 2.4.5</a> 	
A4	Is the order of navigational elements consistent across the site?	<a href="#">WCAG 2.0 Success Criterion 3.2.3</a> 	
A5	Can auto updating, moving, blinking, and scrolling content be paused or adjusted?	<a href="#">WCAG 2.0 Success Criterion 2.2.2</a> 	
A6	Are all site controlled documents (PDF, Word, etc) fully accessible or have a <a href="#">conforming alternate version</a> 	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
A7	If there are any time limits on interacting with content, can they be turned off, adjusted, or extended?	<a href="#">WCAG 2.0 Success Criterion 2.2.1</a> 	

ID	Requirements	Traceability back to 508	Result
A8	Are operational instructions that rely on sensory characteristics avoided? (Ex. Click the square, blue button to continue)	<a href="#">WCAG 2.0 Success Criterion 1.3.3</a> 	
A9	Is the site free from pages that re-direct after a timeout?	<a href="#">WCAG 2.0 Success Criterion 2.2.1</a> 	
A10	Are elements with the same functionality consistently identified across pages?	<a href="#">WCAG 2.0 Success Criterion 3.2.4</a> 	
A11	Do headings accurately describe the content they visually define?	<a href="#">WCAG 2.0 Success Criterion 2.4.6</a> 	

## Section B: General Code Inspection

ID	Requirements	Traceability back to 508	Result
B1	Is the default language of the page set?	<a href="#">WCAG 2.0 Success Criterion 3.1.1</a> 	
B2	Has the language been properly set for foreign words or phrases?	<a href="#">WCAG 2.0 Success Criterion 3.1.2</a> 	
B3	Is the page free from major errors defined in <a href="#">W3 Failure #70</a>  when run against an <a href="#">HTML validator</a>  .	<a href="#">WCAG 2.0 Success Criterion 4.1.1</a> 	

ID	Requirements	Traceability back to 508	Result
B4	Are duplicate ID values on the same page avoided?	<a href="#">WCAG 2.0 Success Criterion 4.1.1</a> 	
B5	With styles disabled, is the reading order of the content logical?	<a href="#">WCAG 2.0 Success Criterion 1.3.2</a> 	
B6	Do all frames have a title attribute that accurately defines the content?	<a href="#">WCAG 2.0 Success Criterion 4.1.2</a> 	
B7	Does the page have a title attribute that accurately defines the content?	<a href="#">WCAG 2.0 Success Criterion 2.4.2</a> 	
B8	Does content intended to be accessible by assistive technology refrain from using display:none or aria-hidden=true?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
B9	If ARIA is present, does the ARIA coding both meet ARIA specifications and give an accurate representation of the content?	<a href="#">WCAG 2.0 Success Criterion 4.1.2</a> 	
B10	Are Fieldset tags only used for form fields? (Not to make a box around a piece of content)?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	

## Section C: Keyboard Navigation

ID	Requirements	Traceability back to 508	Result
C1	Are all elements that can be operated by a mouse also able to be operated by keyboard?	<a href="#">WCAG 2.0 Success Criterion 2.1.1</a> 	
C2	When tabbing through the page, do all elements have a clear visual indication that they have focus?	<a href="#">WCAG 2.0 Success Criterion 2.4.7</a> 	
C3	When tabbing the page, are keyboard traps avoided?	<a href="#">WCAG 2.0 Success Criterion 2.1.2</a> 	
C4	Is the tab order of the page logical?	<a href="#">WCAG 2.0 Success Criterion 2.4.3</a> 	
C5	When tabbing through the page, are <a href="#">changes of context</a>  avoided when an element receives focus?	<a href="#">WCAG 2.0 Success Criterion 3.2.1</a> 	
C6	Is there a method to bypass blocks of repetitive content (such as navigation)?	<a href="#">WCAG 2.0 Success Criterion 2.4.1</a> 	

### Section D: Sites containing Color

ID	Requirements	Traceability back to 508	Result
D1	Is information conveyed by methods other than color alone?	<a href="#">WCAG 2.0 Success Criterion 1.4.1</a> 	

ID	Requirements	Traceability back to 508	Result
D2	Does all text (with the exception of logos) have a contrast ratio of 4.5:1 or greater no matter the font size?	<a href="#">WCAG 2.0 Success Criterion 1.4.3</a>  (Size stipulation not considered by HHS)	

## Section E: Sites containing Links

ID	Requirements	Traceability to 508	Result
E1	Are links distinguished by a method other than color?	<a href="#">WCAG 2.0 Success Criterion 1.4.1</a> 	
E2	Can all link text be understood out of context? If not, does generic link have sufficient content?	<a href="#">WCAG 2.0 Success Criterion 2.4.4</a> 	
E3	Do linked images either have an empty alt tag and link text, or no link text and appropriate alt text?	<a href="#">WCAG 2.0 Success Criterion 1.1.1</a> 	

## Section F: Sites containing Images

ID	Requirements	Traceability to 508	Result
F1	Do all images have an alt attribute?	<a href="#">WCAG 2.0 Success Criterion 1.1.1</a> 	

ID	Requirements	Traceability to 508	Result
F2	Do all images conveying information have alt text that provides the same level of understanding a visual user would gain?	<a href="#">WCAG 2.0 Success Criterion 1.1.1</a> 	
F3	Do all decorative images have an empty alt tag (alt="") or are included via the CSS?	<a href="#">WCAG 2.0 Success Criterion 1.1.1</a> 	
F4	Is the CSS free from any images conveying information that do not have a text alternative?	<a href="#">WCAG 2.0 Success Criterion 1.1.1</a> 	
F5	Do complex images have an alternate accessible means of understanding?	<a href="#">WCAG 2.0 Success Criterion 1.1.1</a> 	
F6	Is the page free from images of text? (Picture of an informational table, screenshot of text from another source, etc)	<a href="#">WCAG 2.0 Success Criterion 1.4.5</a> 	

## Section G: Sites containing Audio/Video

ID	Requirements	Traceability to 508	Result
G1	Do all audio only or video only (video without any sound) files have an accurate transcript?	<a href="#">WCAG 2.0 Success Criterion 1.2.1</a> 	
G2	Do all videos have accurate and synchronized captions?	<a href="#">WCAG 2.0 Success Criterion 1.2.2</a> 	

ID	Requirements	Traceability to 508	Result
G3	Are there any informational parts of the video that require audio description to be understood by users with limited sight and if so, is a second version with <a href="#">audio description</a> available	<a href="#">WCAG 2.0 Success Criterion 1.2.5</a> 	
G4	Is there a way to turn off sound that automatically plays for more than 3 seconds?	<a href="#">WCAG 2.0 Success Criterion 1.4.2</a> 	

### Section H: Sites containing Tables

ID	Requirements	Traceability to 508	Result
H1	If layout tables are used, is data table markup (Summary, TH, ID, Headers) avoided?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
H2	If layout tables are used, is the intended order of the content intact?	<a href="#">WCAG 2.0 Success Criterion 1.3.2</a> 	
H3	Are data tables implemented with data table coding?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
H4	Do all header cells utilize the TH tag? Do all data cells utilize the TD tag?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
H5	Do all Header cells contain text?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	

ID	Requirements	Traceability to 508	Result
H6	Do data tables with 1 set of both column and row headers appropriately use scope to associate to data cells?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
H7	Do data tables with more than 1 set of column and/or row headers appropriately use id/headers to associate to data cells?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	

**Section i: Sites containing semantic structure**

ID	Requirements	Traceability to 508	Result
i1	Are all visual bulleted and numbered lists correctly coded with HTML list tags?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
i2	Are visual headings correctly coded with HTML heading tags? (<h1>, <h2>, etc)	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
i3	Do heading tags follow a logical hierarchical progression?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
i4	Are heading tags only used on text that defines a section of content?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
i5	Is emphasized or special text correctly coded with HTML heading tags? (<em>, <strong>, <sup>, etc)	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	

**Section J: Sites containing Forms**

ID	Requirements	Traceability to 508	Result
J1	Are all form fields correctly coded with descriptive and accurate labels?	<a href="#">WCAG 2.0 Success Criterion 3.3.2</a> 	
J2	Do grouped form fields have correctly coded fieldset and legend tags?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	
J3	Are form validation errors clear and accurately identified in text?	<a href="#">WCAG 2.0 Success Criterion 3.3.1</a> 	
J4	Is the form free of making a selection when attempting to navigate the options? (only submits when user makes a selection)	<a href="#">WCAG 2.0 Success Criterion 3.2.2</a> 	
J5	Are Orphan label tags avoided?	<a href="#">WCAG 2.0 Success Criterion 1.3.1</a> 	

Section K: Sites containing common elements / dynamic content

ID	Requirements	Traceability to 508	Result
K1	Is the role of an element (eg Button) properly defined , accurate, and communicated to assistive technology?	<a href="#">WCAG 2.0 Success Criterion 4.1.2</a> 	
K2	Is the state of an element (expanded or collapsed) properly defined , accurate, and communicated to assistive technology?	<a href="#">WCAG 2.0 Success Criterion 4.1.2</a> 	

ID	Requirements	Traceability to 508	Result
K3	Are <a href="#">modal dialogues</a> able to be used with keyboard alone and assistive technology? Focus management, hiding underlying content, etc.	<a href="#">Multiple WCAG 2.0 Criterion</a>	
K4	Are <a href="#">carousels</a> able to be used with keyboard alone and assistive technology? Ability to pause, navigate to individual items, etc.	<a href="#">Multiple WCAG 2.0 Criterion</a>	
K5	Are <a href="#">menus</a> able to be used with keyboard alone and assistive technology? Ability to expand and navigate subitems	<a href="#">Multiple WCAG 2.0 Criterion</a>	
K6	Are <a href="#">expandable/collapsible accordion elements</a> able to be used with keyboard alone and assistive technology? Ability to expand and navigate subitems	<a href="#">Multiple WCAG 2.0 Criterion</a>	
K7	Are <a href="#">Tabbed Interfaces</a> able to be used with keyboard alone and assistive technology? Ability to tell active tab and navigate to appropriate content	<a href="#">Multiple WCAG 2.0 Criterion</a>	
K8	Are <a href="#">CAPTCHA interfaces</a> able to be used with keyboard alone and assistive technology? Ability to tell the clue and successfully enter and authenticate	<a href="#">Multiple WCAG 2.0 Criterion</a>	
K9	If a user selection creates an unexpected change on the page, was the change communicated to the user?	<a href="#">WCAG 2.0 Success Criterion 3.2.2</a>	

Checklist obtained from: <https://www.hhs.gov/web/section-508/making-files-accessible/checklist/html/index.html>

# Multimedia File Accessibility Checklist

ID	1.0.Master Requirements for all Documents	Yes (Pass)	No (Fail)	N/A
1.1	Does the document file name not contain spaces and/or special characters?			
1.2	Is the document file name concise, generally limited to 20-30 characters, and makes the contents of the file clear in the context in which it is presented?			
1.3	Does the document utilize recommended fonts (i.e., Times New Roman, Verdana, Arial, Tahoma, Helvetica, or Calibri)?			
1.4	Does the document refrain from using flashing/flickering text and/or animated text?			
1.5	Do all URLs contain the correct hyperlink and display the fully qualified URL (i.e., <a href="http://www.samhsa.gov">http://www.samhsa.gov</a> and not <a href="http://www.samhsa.gov">www.samhsa.gov</a> )?			
1.6	Are all URLs linked to correct Web destinations?			
1.7	Are e-mail links accessible?			
1.8	Has a separate accessible version of the multimedia file been provided when there is no other way to make the content accessible?			

ID	2.0.Secondary Sensory-Channel Requirements	Yes (Pass)	No (Fail)	N/A
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2.1	If a video—Does the video or animation contain synchronized captioning?			
2.2	If an animation—Does the animation have a text equivalent?			
2.3	If a sound file—Does the sound file have a matching transcript file?			

ID	3.0. Functional Control Requirements	Yes (Pass)	No (Fail)	N/A
3.1	Does the file have the minimum required media controls of video resizing, volume control, play/stop buttons, and the ability to turn captions on and off?			
3.2	Are all media controls keyboard accessible?			
3.3	Is the media embedded in a way that allows the user to use keyboard controls to move in and out of the video in relation to surrounding content?			

Checklist obtained from: <https://www.hhs.gov/web/section-508/making-files-accessible/checklist/multimedia/index.html>



## NAD Model Policy for Effective Communication in Hospitals

### I. DEFINITIONS

A. The term “auxiliary aids and services” includes but is not limited to: qualified interpreters on-site or through video remote interpreting (VRI) services; notetakers; real-time computer-aided transcription services; written materials; exchange of written notes; telephone handset amplifiers; assistive listening devices; assistive listening systems; telephones compatible with hearing aids; closed caption decoders; open and closed captioning, including real-time captioning; voice, text, and video-based telecommunications products and systems, including text telephones (TTYs), videophones, and captioned telephones, or equally effective telecommunications devices; videotext displays; accessible electronic and information technology; or other effective methods of making aurally delivered information available to individuals who are deaf or hard of hearing. 28 C.F.R. § 36.303(b)(1) (effective March 15, 2011).

B. The term “Companion” means a family member, friend, or associate of an individual seeking access to, or participating in the patient’s healthcare, who, along with such individual, is an appropriate person with whom the hospital should communicate in accordance with the provisions of the Health Insurance Portability and Accountability Act (“HIPAA”). The term “Companion” shall not include visitors who do not fulfill the roles set forth in this Paragraph.

C. The term “Hospital Personnel” means: all employees and officers of the Hospital, including, without limitation, nurses, social workers, technicians, admitting personnel, billing staff, and therapists.

D. The term “non-scheduled incidents” are situations in which there are fewer than two hours between the time when a “Patient” or a “Companion” makes a “request” for an interpreter and the time when the services of an interpreter are desired. The term “scheduled incidents” are appointments or situations in which there are two or more hours between the time when a “Patient” or a “Companion” makes a “request” for an interpreter and when the services of the interpreter are desired.

E. The term “Patient” means: a person who is deaf or hard of hearing and is seeking and/or receiving medical services at the Hospital. When the word “patient” is not capitalized, it shall have its ordinary meaning and shall include all patients, whether they be deaf or hard of hearing or not. Whenever the Hospital is required to consult, interview, or otherwise take into account the wishes of a Patient under this Policy, and the Patient is a minor or relies upon others to make decisions about medical care for himself or herself, the Hospital shall take the required action as if the Patient’s adult guardian is the Patient (i.e., the adult guardian makes the requests for auxiliary aids on behalf of the minor Patient), unless the Patient is otherwise by law competent to consent to treatment.

F. The term “request,” for purposes of the timetables and obligations in Section I (definition of “non-scheduled” and “scheduled” incidents) and Sections II(4) and (7) of this Policy, shall mean (a) a request for auxiliary aids or services made by the completion of a Deaf or Hard of Hearing Request Form, (b) circumstances that indicate that a patient is deaf or hard of hearing and that the Patient would like or would benefit from an interpreter, but a Deaf or Hard of Hearing Request Form cannot be completed by or on behalf of the Patient due to exigent circumstances (e.g.,



incapacitation of a non-minor Patient), or (c) instances involving a request made from a location other than at the Hospital, when Hospital Personnel in the patient's relevant unit (including Emergency Department) are informed -- or the Patient or Companion, or someone on their behalf, informs non-medical staff whose responsibilities include scheduling interpreter services -- of a Patient's or Companion's desire for an on-site interpreter or other auxiliary aid.

G. The term "sign language interpreter," "oral interpreter," or "interpreter" means: a qualified interpreter who, via video remote interpreting (VRI) service or an on-site appearance, is able to interpret effectively, accurately and impartially, both receptively and expressively, using any specialized vocabulary necessary for effective communication with the "Patient" or "Companion" who is using the interpreter's services. Specifically, for medical and hospital settings, the qualified interpreter must be trained and experienced in effectively and accurately interpreting medical terminology both receptively and expressively. Someone who has only a rudimentary familiarity with sign language or finger spelling is not an "interpreter" under this Policy. Likewise, someone who is fluent in sign language but who does not possess the ability to process spoken communication into the proper signs or to observe someone signing and change their signed or finger spelled communication into spoken words is not an interpreter. At a minimum, all interpreters utilized by the Hospital are to possess certification as recognized by the Registry of Interpreters for the Deaf and as required by local laws.

H. The term "TTY" or "TDD" means: a device that is used with a telephone to communicate with persons who are deaf or hard of hearing by typing and reading communications.

I. The term "video remote interpreting" (VRI) means: an interpreting service that uses video conference technology over dedicated lines or wireless technology offering high-speed, wide-bandwidth video connection that delivers high-quality video images as provided in 28 C.F.R. § 36.303(f) (as effective March 15, 2011).

J. The term "videophone" means: a telephone with a video screen capable of full duplex (bi-directional), high-quality video and audio transmissions for visual, real-time communication.

## **II. PROCEDURES**

### **1. Effective Communication and Equal Access**

The Hospital shall provide appropriate auxiliary aids and services, including interpreters, where such auxiliary aids and services are necessary to ensure effective communication with persons who are deaf or hard of hearing, and it shall provide persons who are deaf or hard of hearing with the full and equal enjoyment of the services, privileges, facilities, advantages, and accommodations of the Hospital as required by the Americans with Disabilities Act, Section 504 of the Rehabilitation Act, and Section 1557 of the Affordable Care Act.

In determining what auxiliary aids and services are necessary, the Hospital shall give primary consideration to the requests of people with disabilities. The Hospital must provide an opportunity for Patients and Companions to request the auxiliary aids and services of their choice. The Hospital shall honor the choice unless it can demonstrate that the requested auxiliary aid or service is not readily available.



## 2. Patient Intake

A. As part of its patient registration process, the Hospital shall inquire into whether the patient and/or the patient's accompanying companion(s) is/are deaf or hard of hearing, and whether the patient expects to have any companion visit who is deaf or hard of hearing. The patient registration process shall occur at the first reasonable opportunity to interact with a patient at the Hospital or the first medically prudent opportunity thereafter.

B. If there is any indication from such inquiry, or from Hospital Personnel's observations or interactions with the patient or the patient's companion(s) present in the Hospital, that they may be deaf or hard of hearing, Hospital Personnel shall as soon as practicable provide the patient and/or the companion with a Deaf or Hard of Hearing Communication Request Form ("Form"), whether in paper or electronic form. See attached Exhibit A. The Form shall be filled out by either the Patient and/or the Companion or may be completed by Hospital Personnel based on the information provided by those individuals. The Hospital shall ensure that a completed Form is obtained from each individual Patient or Companion who agrees to complete the Form. After being completed, the Form(s) shall be maintained in the patient's medical chart, whether kept in paper or electronic form. If the Hospital has and reason to believe the deaf or hard of hearing patient and/or the companion cannot independently complete the Form, the Hospital shall present the Alternative Deaf or Hard of Hearing Communication Request Form ("Alternative Form"), either in paper or electronic form. See attached Exhibit C. If an interpreter is requested in this manner, the Patient or Companion shall subsequently be given the opportunity to fill out the Form with an interpreter to indicate additional communication needs.

C. If a patient identifies a Companion who is not presently at the Hospital but is expected at the Hospital during the patient's stay, Hospital Personnel shall provide the patient with the contact information of Hospital Personnel who can assist the Companion in completing a Deaf or Hard of Hearing Communication Request Form in advance of arriving at the Hospital and with the contact information of Hospital Personnel who can assist the Companion in completing the Form at the Hospital (if the Form is not completed in advance). If at any point during a patient's stay, a Companion identifies himself or herself as deaf or hard of hearing, the Hospital shall promptly provide him/her with the Form, if it has not done so already.

D. In the event that circumstances indicate that a patient is deaf or hard of hearing, but a Form or Alternative Form cannot be completed by or on behalf of the patient, Hospital Personnel shall promptly comply with the requirements set forth on Paragraph 3(A), below and shall facilitate completing the Form as soon as practicable thereafter.

E. The patient's medical chart shall contain a notation to alert Hospital Personnel to the fact that the Patient and/or Companion is deaf or hard of hearing. The chart shall indicate the mode of communication requested by and provided to the Patient and/or Companion.

F. The Hospital shall provide any auxiliary aids and services that the Patient and/or Companion requests unless the Hospital can show that the requested auxiliary aid or service is not readily available. Even when such requested auxiliary aid or service is not readily available, the Hospital shall take all appropriate steps to provide effective communication to the maximum extent possible with auxiliary aids and services that are available.



3. Provision of Interpreter

A. Contacting the Scheduler:

1. Upon (i) completion of the Deaf or Hard of Hearing Communication Request Form requesting an on-site interpreter or (ii) other “request” as defined in this Policy, Hospital Personnel shall as soon as practicable contact the Scheduler identified in Paragraph 5(A) to request the provision of an interpreter. In the case of an unforeseen medical emergency affecting the patient or other patients in the area requiring the immediate attention of the Hospital Personnel involved in processing the Patient’s or Companion’s Form, the Scheduler identified in Paragraph 5(A) shall be contacted as soon as practicable.

2. In the event that circumstances indicate that the patient is deaf or hard of hearing but a Form or Alternative Form cannot be completed by or on behalf of the Patient due to exigent circumstances (e.g., incapacitation of a non-minor Patient), Hospital Personnel shall promptly contact the Scheduler identified in Paragraph 5(A) to request the provision of an on-site interpreter, provided that there is some indication that the Patient would like or benefit from an on-site interpreter, or Hospital Personnel may arrange for VRI as permitted in Paragraph 5(C).

3. If the Patient’s circumstances prevent the Form or Alternative Form from being completed and the Hospital has decided in the interim not to provide the Patient an on-site interpreter, then as soon as practicable the Hospital shall follow the procedures set forth above in Paragraph 2, including providing a Deaf or Hard of Hearing Communication Request Form, and in Paragraph 3(A)(1) for contacting the Scheduler to request the provision of an on-site interpreter, if one is requested.

B. Upon being contacted, the Scheduler shall arrange for the interpreter requested according to Paragraph 3 and the timetable set forth in Paragraph 4(A). When requesting any on-site interpreter, the Scheduler shall follow the procedures set forth in Paragraph 5. The Hospital may honor but shall not be bound by the personal preferences of a Patient and/or Companion for a particular, named interpreter, vendor or agency. However, the Hospital shall honor the preference of the Patient and/or Companion with respect to the gender of the interpreter. At all times, the interpreter provided by the Hospital shall be qualified in that the interpreter is able to accurately, effectively, and impartially interpret all communications between the Patient/Companion and the Hospital staff/contracting medical personnel.

C. In the instances in which an interpreter has been provided, Hospital Personnel shall interview the Patient or, assuming such person has remained at the Hospital and is available to Hospital Personnel, the Companion (or both, if both are deaf or hard of hearing), with the use of the interpreter, if an interpreter has been requested, as soon as practicable after the interpreter has been provided, in order to determine the interpreter schedule over the anticipated duration of the patient’s Hospital stay. If the Companion is not available for such interview, Hospital Personnel shall interview the Companion as soon as practicable upon becoming aware of his or her return to the patient’s location in the Hospital. Such schedule shall be created in consultation with the Patient or Companion considering the nature, length and complexity of the communication involved, the Patient’s condition, and the context in which the communication is taking place.



D. If the patient is expected to be in the Hospital more than two hours, but fewer than forty-eight (48) hours, the Hospital may use the Interpreter Schedule, attached hereto as Exhibit B, to document the requested schedule, but is not required to do so. The Hospital shall, however, determine an appropriate schedule for the provision of interpreting services as contemplated in Paragraph 3(C).

E. If the patient is expected to be in the Hospital forty-eight (48) hours or more and on-site interpreter services are provided, the schedule of such services shall be reduced to writing on the Interpreter Schedule. The Interpreter Schedule(s) shall identify the schedule of interpreters for each day that the patient is expected to be in the Hospital. The Interpreter Schedule shall be documented in writing as soon as practicable after it is determined that the patient's stay in the Hospital will extend more than forty-eight (48) hours, but in no event shall such documentation occur more than forty-eight (48) hours after the patient's arrival to the Hospital, except as extended in Paragraph 3(F). When completing the Interpreter Schedule, Hospital Personnel shall assist the Patient and/or Companion by providing the following information (to the extent that it is both reasonably ascertainable and allowed under HIPAA and other applicable laws):

- i. the anticipated period of time that the patient will be in the Hospital;
- ii. the nature of the patient's condition, including its seriousness and stability;
- iii. the likelihood of Hospital Personnel or other medical personnel needing to communicate with the Patient or Companion at unexpected or unforeseen times;
- iv. the most common hours that Hospital Personnel or other medical personnel will need to communicate with the Patient or Companion;
- v. the availability of interpreter services free of charge at any time during the hospital stay or visit; and
- vi. other assistive devices which may be available.

The Hospital Personnel shall not attempt to discourage or dissuade Patients or Companions from requesting an interpreter. The simple provision of the information listed immediately above shall not be construed as an attempt to discourage or dissuade Patients or Companions from requesting an interpreter. The Hospital shall instruct non-employee medical personnel (1) not to discourage or dissuade Patients or Companions from requesting an interpreter and (2) to refer any issues or matters regarding auxiliary aids or services to Hospital Personnel.

F. If a patient whom the Hospital earlier anticipated would be in the Hospital for fewer than forty-eight (48) hours ultimately stays for forty-eight (48) hours or more, the Hospital shall follow the procedures set forth in Paragraph 3(E), above, as soon as practicable after the patient's forty eighth (48<sup>th</sup>) hour.

G. The Patient and/or Companion shall be asked to sign and date each Interpreter Schedule that is created for that individual. The Interpreter Schedule(s) shall be maintained in the patient's medical chart, whether such chart is maintained in paper or electronic form, and the Patient and/or Companion shall be provided with a copy of their Interpreter Schedule or reasonable facsimile thereof either in paper or electronic form.

H. Throughout the patient's stay, if such stay is forty-eight (48) hours or more, Hospital Personnel shall consult with the Patient or Companion periodically to assess the effectiveness of the Interpreter Schedule and to update or modify



it, if such modifications are requested or necessary. Each time a Patient and/or Companion is consulted regarding modifications or updates to their Interpreter Schedule, Hospital Personnel shall provide the Patient and/or Companion with the latest information contemplated by Paragraph 3(E)(i)-(vi). Any time a change is made to the Interpreter Schedule, a notation will be made, and the Patient and/or Companion shall be asked to sign and date the document, and the document shall be maintained in the patient's medical chart.

I. The Hospital shall provide an interpreter in conformance with Paragraph 3(C). It shall be the responsibility of Hospital Personnel to contact the Scheduler identified in Paragraph 5(A) to set up such interpreter services. Where a Patient's and/or Companion's request for interpreter services is clearly unreasonable in relation to, or clearly incongruent with, the situation presented by the patient's medical condition and course of treatment, the Hospital may provide interpreter services other than as requested or may utilize other auxiliary aids and services – but not other than what is required for effective communication. Under such circumstances, the Hospital shall document the deviation from the requested interpreter services, the justification for the deviation, and the extent of such deviation. Such documentation must also be kept in the patient's medical chart.

J. For stays lasting 48 hours or longer, the Hospital may, instead of having an on-site interpreter present, have a designated interpreter be available on-call during overnight periods when the Hospital reasonably believes that the Patient will be sleeping and will not require substantial communication. If the Patient wakes up and requires substantial communication with Hospital Personnel, the Hospital shall immediately call the designated interpreter, who then shall show up on site within 45 minutes of being called by the Hospital.

K. If a Patient and/or Companion does not request or refuses an interpreter but Hospital Personnel have reason to believe that such person would benefit from one, Hospital Personnel shall remind the individual that interpreters are available free of charge. The Hospital may elect to schedule an interpreter if deemed necessary by medical staff but is under no obligation to do so.

L. If a Patient and/or Companion indicates to Hospital Personnel that he or she wants an interpreter after failing to request one on the Deaf or Hard of Hearing Communication Request Form, Hospital Personnel shall provide the Patient or Companion with a new Deaf or Hard of Hearing Communication Request Form. Hospital Personnel shall then comply with the requirements of Paragraphs 2 and 3 as if the Patient or Companion had originally requested an interpreter. Both the original Deaf or Hard of Hearing Communication Request Form and the new one shall be kept in the patient's medical chart.

M. If a Patient or Companion has an ongoing relationship with the Hospital involving successive scheduled visits to the Hospital (scheduled or anticipated prior to the patient's discharge from a prior visit), and requests an interpreter or other auxiliary aids for subsequent visits to the Hospital, the Hospital shall take steps to expedite the procedures for providing an interpreter or other auxiliary aid without necessarily requiring a separate request or the completion of a new Deaf or Hard of Hearing Communication Request Form for each successive visit.



4. Timetable for Auxiliary Aids

A. The Hospital shall provide the Patient and/or Companion with interpreters, as required under this Policy, in a timely manner, according to the timetable set forth in the chart below.

Auxiliary Aid	Time for Providing It
Interpreter/VRI	<p>For non-scheduled incidents, the Hospital shall provide (a) an on-site interpreter no more than two hours from the time the Patient and/or Companion requests an interpreter if the service is provided through a contracted service or through an interpreter who is located off of the Hospital premises at the time the request arises, or (b) 15 minutes from the time the Patient and/or Companion requests (as defined by this Policy) an interpreter if the service is provided through VRI.</p> <p>For scheduled incidents, the Hospital shall provide an interpreter at the time of the scheduled incident.</p> <p>For overnight periods when the Hospital reasonably believes that the Patient will be sleeping and will not require substantial communication, the Hospital may elect to have a designated interpreter be available on-call. The designated interpreter must show up on the site within 45 minutes of being called by the Hospital.</p> <p>Any response time that is delayed from the times set forth above because of a force majeure event is excluded from a determination of whether the prescribed response time has been met. Force majeure events are events outside the reasonable control of the Hospital, its IS Provider(s), or the interpreter called to respond. In such instances, the Hospital shall make its best efforts to ensure prompt, effective communication by, for example, immediately contacting the Scheduler and/or IS Provider in an attempt to secure another interpreter.</p>

B. The Hospital shall provide other auxiliary aids, among those identified in the attached Deaf or Hard of Hearing Communication Request Form, no later than 30 minutes after the request is made. If the Hospital fails to provide a requested auxiliary aid or if it provides one outside of the required time period, the Hospital shall keep a record of such incident, including the date and time that it occurred, the name of the patient and, if applicable, the Companion involved, and an explanation for the delay or refusal.



5. Procedures for Securing an On-Site Interpreter

A. The Hospital shall designate one telephone number as the exclusive interpreter request line. An individual with the capacity to initiate the scheduling of interpreters (“Scheduler”) shall respond to telephone calls on this telephone line twenty-four (24) hours per day, seven (7) days per week. Hospital Personnel shall be instructed that contacting the Scheduler on the interpreter request line or by e-mail are the primary method for securing on-site interpreters. Hospital Personnel may use their best judgment to respond to circumstances as they arise to secure interpreters through other means, if necessary.

B. The Hospital shall maintain at least two contracts with an interpreter service provider (“IS Provider”) to provide interpreters at the request of the Hospital.

C. The Hospital may contract to provide interpretive services through VRI. If at any point a Patient and/or Companion expresses a preference for an on-site interpreter instead of VRI, Hospital Personnel shall give consideration to such preference pursuant to the following standards on appropriate use of VRI and on-site interpreting services. The Hospital may only use VRI: (i) while Hospital Personnel are waiting for an on-site interpreter to arrive, (ii) if duration of the patient’s stay is expected to be under two (2) hours, (iii) if a need to communicate with a Patient and/or Companion who has expressed a preference for an on-site interpreter arises outside of the Patient’s and/or Companion’s Interpreter Schedule; or (iv) either (a) the patient has not expressed a preference for an on-site interpreter or (b) the Patient’s and/or Companion’s expressed preference for an on-site interpreter has been considered and VRI results in effective communication. When on-site interpreter services are being secured or are required, the timetable for providing on-site interpreter service set forth in Paragraph 4(A) shall apply and shall begin to run when the Patient and/or Companion makes such a preference known.

D. If, based on the circumstances, VRI is not providing effective communication after VRI has been provided, VRI shall not be used as a substitute for an on-site interpreter, and an on-site interpreter shall be provided in accordance with the timetable set forth in Paragraph 4(A). The time periods for securing an on-site interpreter provided in this Policy shall apply and shall begin to run when the Hospital is informed, knew, or reasonably should have known that VRI was not providing effective communication; in addition to these time constraints, the Scheduler shall employ best efforts to expedite the provision of on-site interpreter services under these circumstances.

E. If the Hospital chooses to contact technical support to fix any VRI problems, such as a difficulty setting up the VRI machine, difficulty transmitting video of the quality described in Paragraph 6(A), or difficulty transmitting audio of the quality described in Paragraph 6(A), the Hospital shall call an on-site interpreter within 30 minutes of when VRI problems are first identified unless such problems are fully resolved within that time frame. If VRI problems recur, the Hospital shall call an on-site interpreter immediately unless the Patient or Companion explicitly requests otherwise.

F. When the Scheduler receives an interpreter request for a scheduled incident, the Scheduler may fill such request using any resource at its disposal. Regardless of what resource is used to supply the interpreter, the interpreter shall be provided to the Patient or Companion within the time frame set forth in Paragraph 4.



G. The Scheduler shall be trained on how to respond to requests for non-interpreter auxiliary aids and shall refer such requests to the appropriate Hospital Personnel.

6. VRI

A. Whenever VRI is provided or used, the Hospital shall comply with all standards listed in Exhibit D. These standards represent concrete means to comply with federal mandates including but not limited to:

- i. the minimum requirements for technology and equipment to ensure compliance with 28 C.F.R. § 36.303(f), 45 C.F.R. § 92.202 and 28 C.F.R. § 35.160(d);
- ii. the minimum requirements for Video Interpreters to ensure interpreters are qualified in compliance with 28 C.F.R. § 36.104, 45 C.F.R. § 92.202 and 28 C.F.R. § 35.160;
- iii. the minimum requirements for procedures and staff training to ensure VRI is provided in a manner that ensures effective communication as required by 28 C.F.R. § 36.303, 45 C.F.R. § 92.202 and 28 C.F.R. § 35.160; and
- iv. the minimum factors to consider relative to the patient and medical situation to ensure effective communication as required by 28 C.F.R. § 36.303, 45 C.F.R. § 92.202 and 28 C.F.R. § 35.160.

B. The Hospital shall permit the Patient and/or Companion to use VRI to communicate with any Hospital Personnel. The Hospital shall not limit the Patient's or Companion's VRI use to communication only with certain Hospital Personnel, such as doctors.

7. Interpreter Continuity

All interpreter services who provide interpreters for the Hospital shall be requested by the Hospital to provide – to the extent practicable and to the extent permissible under applicable ethics guidelines and the law, including but not limited to HIPAA – replacement interpreters for the same Patient and/or Companion with general background information on the patient's condition, medical terms that are often used, and other relevant information to make communication with the replacement interpreter easier for the Patient and/or Companion.

8. Maintenance Log

The Hospital shall maintain data connected with each request for interpreter services so that the following information can be retrieved upon request:

- (a) the patient's and, if applicable, the Companion's name;
- (b) the time and date of the patient's admission and/or care at the Hospital and whatever such visit was scheduled;
- (c) the time and date that the request (as defined by this Policy) for an interpreter service was made;



- (d) the type of interpreter service provided, i.e., whether it was an on-site interpreter, an off-site interpreter, or VRI; and
- (e) the time and date the interpreter service was actually provided or a statement that the interpreter service was not provided.

In addition, the Hospital shall include the documentation required by Paragraph 3(I) involving deviations from requested interpreter services. Such data shall be maintained by the Hospital for no less than a period of three (3) years. Such data shall be available for review upon reasonable request by the NAD.

#### 9. Complaint Resolution

The Hospital shall maintain an effective complaint resolution mechanism for use by patients and/or companions and will maintain records of all complaints (whether oral or written) made to the Hospital regarding the provision of auxiliary aids and/or regarding the communication needs or desires of Patients or Companions.

To be effective, the complaint resolution mechanism must permit the Patient or Companion to escalate any complaint about the provision or quality of auxiliary aids and services to a person knowledgeable about effective communication requirements and empowered to provide the remedy that the Patient or Companion seeks. Further, the complaint resolution mechanism must enable the Patient or Companion to escalate the complaint at the time the complaint is identified, regardless of the hour or day.

All Hospital Personnel receiving complaints from Patients or Companions shall be responsible for ensuring that these Patients or Companions are promptly and properly referred to the complaint resolution mechanism process.

The Hospital shall further maintain records of any actions taken with respect thereto. The Hospital shall notify (1) Patients, (2) Companions who complete a Deaf or Hard of Hearing Services Request Form, and (3) other persons who are deaf and hard of hearing and express a complaint about auxiliary aids or services or related procedures, of the Hospital's complaint resolution mechanism, to whom complaints should be made, and the right to receive a written response to the complaint if requested.

Such information shall be provided in writing and shall be provided in American Sign Language to all patients and/or companions that demonstrate a preference for communication in American Sign Language.

Copies of all complaints or notes reflecting oral complaints and the responses thereto shall be maintained by the Hospital for three years. Upon request, the Hospital shall provide the complaining party a written response to the complaint in a timely manner.

#### 10. Prohibition of Surcharges

All auxiliary aids required by this Policy shall be provided free of charge to the patient and/or companion, and the fact that such aids are free of charge shall be communicated to the patient and/or companion in a manner understandable



to them. The Hospital shall not place a surcharge on the missed appointment fee only for deaf or hard of hearing patients to reflect the cost of auxiliary aids and services. Missed appointment fees must be applied to all patients equally.

11. Notice to Patients and Companions

As soon as practicable after Hospital Personnel have determined that an interpreter should be provided to a Patient and/or a Companion, the Hospital shall update such Patient and/or Companion of the current status of efforts being taken to secure an interpreter on his or her behalf. Additional updates are to be provided thereafter as necessary until an interpreter is secured. Notification of efforts to secure a qualified interpreter does not lessen the Hospital's obligation to provide qualified interpreters in a timely manner as required by this Policy.

12. Other Means of Communication

Between the time that an interpreter is requested and when an interpreter is made available, the Hospital shall continue to try to communicate with the Patient or Companion for such purposes and to the same extent as they would have communicated with the person but for the disability, using all available methods of communication (including, but not limited to, written notes) if VRI is not available. This provision in no way lessens the Hospital's obligation to provide qualified interpreters in a timely manner as required by this Policy for other communications with the Patient and/or Companion.

13. Restricted Use of Certain Persons to Facilitate Communication

The Hospital may not rely upon a family member, companion, advocate, patient, or friend of a patient and/or companion to interpret or facilitate communications between Hospital Personnel and a Patient and/or Companion. However, if capable, such adult person may be used to interpret or facilitate communications (1) in an emergency involving an imminent threat to the safety or welfare of an individual or the public where there is no interpreter available, or (2) where the individual with a disability specifically requests that the accompanying adult interpret or facilitate communication, the accompanying adult agrees to provide such assistance, and reliance on that adult for such assistance is appropriate under the circumstances.

The Hospital may rely on the accompanying adult in the second situation only if the Hospital has offered to provide an interpreter free of charge and the deaf individual declines the offer in favor of using the adult companion. This provision in no way lessens the Hospital's obligation to provide appropriate auxiliary aids as required under this Policy.

14. Telecommunication Devices

A. At all times, the Hospital shall have at least one videophone in working order and at least one TTY in working order. All Hospital Personnel shall know whom to contact when a deaf or hard of hearing individual requests a videophone or TTY.



B. The Hospital shall make telecommunications devices available to deaf and hard of hearing individuals in the same manner as telecommunications devices are available to hearing individuals. For example, next to each courtesy phone, the Hospital shall post a sign indicating that a videophone and TTY are available, and how to request such a device. In addition, the Hospital should supply a videophone or TTY in an inpatient room upon request of a deaf or hard of hearing Patient and/or Companion.

C. Access to videophones and TTYs shall be provided to deaf and hard of hearing individuals on the same terms as access to standard telephones is provided to others. Access to videophones and TTYs shall not be limited to Patients and Companions unless the hospital limits all telephone access to patients and companions only.

15. Notice

A. The Hospital shall post and maintain signs of conspicuous size and print, in conformance with the requirements of the ADA Standards for Accessible Design, 28 C.F.R. Part 36, App. A, at 4.30, at all Hospital admitting stations, the emergency department, nurse's stations or in the patient and visitor elevator lobby on the same floor, and wherever a Patient's Bill of Rights is required by law to be posted. The signs shall include the international symbols for "interpreters" and "TTY's."

Such signs shall state:

*Are you or your companion deaf or hard of hearing and in need of assistance? If so, please notify Hospital staff so that we can help.*

To ensure effective communication with patients, their family members, and companions who are deaf or hard of hearing, we provide auxiliary aids and services free of charge, such as: on-site site language and oral interpreters, video remote interpreting (VRI), videophones (VP), TTY's, written materials, telephone handset amplifiers, pockettalkers, telephones compatible with hearing aids, and open and closed captioning of most Hospital programs.

Please ask your nurse or other Hospital personnel for assistance, or contact

\_\_\_\_\_.

The Hospital shall also include that statement in all printings of its Patient Handbook (or equivalent publication(s)), together with a description of the Hospital's complaint resolution mechanism.

B. The Hospital shall include the statement identified in Paragraph 15(A) in a conspicuous place on its Internet and Intranet websites.

C. The Hospital shall publish a written policy statement regarding the Hospital's policy with respect to persons who are deaf or hard of hearing. The policy statement should include, but is not limited to, language that states:



“If you recognize or have any reason to believe that a patient or companion of a patient is deaf or hard of hearing, you must advise the person that auxiliary aids such as sign language and oral interpreters, videophones, TTY’s, video remote interpreting (VRI), written materials, telephone handset amplifiers, other sound amplifiers, assistive listening devices, telephones compatible with hearing aids, and closed captioning of Hospital programs will be provided free of charge. If an interpreter is requested and is selected as the appropriate auxiliary aid, you must also contact the Hospital’s Scheduler at \_\_\_\_\_ to ensure that an interpreter is provided. If you have any questions regarding interpreter services or auxiliary aids, call \_\_\_\_\_.” This statement shall also be posted in a prominent place on the Hospital’s Intranet page.

The Hospital shall distribute this written policy statement with the trainings described below in Section 16.A to all Hospital Personnel with patient responsibility (including affiliated physicians with practicing or admitting privileges), and to all new Hospital Personnel with patient responsibility (including newly affiliated physicians) upon their employment or affiliation with the Hospital. Thereafter, the Hospital shall distribute this written policy statement to all Hospital Personnel (including affiliated physicians) on an annual basis.

D. Should there be any change to the contact information provided pursuant to Paragraphs 15(A)-(C), such information shall be updated within five (5) business days of the change.

E. The Hospital shall ensure that any prior inconsistent notices, signs, materials or documents that provide different information on how to secure an interpreter, whom to call regarding interpreter services, or whom to contact for auxiliary aids are removed or no longer accessible. In accordance with this requirement, the Hospital shall use best efforts to ensure the removal of any unofficial notations or documents with inconsistent information.

#### 16. Training of Hospital Personnel

A. The Hospital shall provide annual mandatory in-service training to active Hospital Personnel and staff identified immediately below with the following objectives: to inform them of the procedures set forth in this Policy; to inform them of the procedures that they should follow in order to arrange interpreter services or other auxiliary aids; to educate them that the Hospital provides interpreters to Patients and/or Companions based on the Patient’s and/or Companion’s wishes or if circumstances indicate that a Patient or Companion needs or desires an interpreter; and to educate Hospital Personnel and staff on their obligations under this Policy.

This training shall be given to the following persons:

- a. Hospital employees with patient responsibility who work in the Emergency Department;
- b. Hospital employees with or likely to have direct patient care responsibility, including, without limitation, the following categories and their equivalents: nurses, nurse’s aides, therapists, social workers, case managers, and medical technicians; and



- c. Key Hospital employees not otherwise trained as provided above, including: all clinical directors and nursing supervisors; all senior-level administrators; personnel who staff the Admission desk (or its equivalent for inpatient registration), the Central Registry desk (or its equivalent for outpatient registration), the General Information desk; all triage nurses and other triage professionals; administrative heads of each department in which communication with patients or their companions, families and friends is likely to occur; desk clerks in units or departments where such individuals are likely to have communications with patients or their companions, families and friends; personnel responsible for billing and insurance issues who routinely interact with patients and their companions, families, and friends; and those physicians with patient care responsibilities who are Hospital employees.

The above list excludes physicians affiliated with the Hospital who are not Hospital employees.

B. All other Hospital Personnel who regularly receive incoming telephone calls from the public shall receive special instructions on using relay operators to make and receive telephone calls and shall receive training generally on the existence of the requirements of this Policy, the contact information for the Director of Patient Experience, the Scheduler, and/or the individuals knowledgeable about this Policy, and the complaint resolution process referenced herein.

All hospital employees who deal directly with patients and/or provide medical services, including nurses, physician's assistants, and admitting personnel, shall receive written instructions regarding which Hospital Personnel to contact if they encounter a patient or companion who appears to be deaf or hard of hearing. The Hospital shall also provide such written instructions to any new registration or clinical contract staff who deal directly with patients and/or provide medical services upon or prior to the commencement of their first shift at the Hospital.

C. (1) The Hospital shall annually conduct one or more training sessions on the communication needs of persons who are deaf or hard of hearing, and shall invite all physicians who are affiliated in any way with the Hospital (including, but not limited to, those doctors with admitting or surgical privileges) to attend. The Hospital shall provide training materials that contain substantially similar information to what is presented at the live training sessions to any affiliated physician upon request. (2) The Hospital shall distribute a set of training materials to all affiliated physicians. These materials shall contain at least the Hospital's Policy Statement and any relevant forms, as well as a description of the Hospital's duty to provide auxiliary aids to Patients and/or Companions under this Policy and the procedures for arranging interpreter services.

D. For persons employed by the Hospital who begin their employment, or whose status becomes active (e.g., after their return from leave status), after the training sessions required in the immediately preceding provisions (Paragraphs 16 (A)-(C)), the Hospital shall provide the training specified above within sixty (60) days after the individual's commencement or reactivation of service to the Hospital.



E. The Hospital shall maintain attendance records of all training conducted pursuant to this Policy, which shall include the names and respective job titles of the attendees, as well as the date, time and location of the training session.

17. Meals and Other Programs and Activities

A. The Hospital shall ensure that effective means are provided on a timely basis for Patients and Companions to select and order meals and access other programs and activities.

B. The Hospital shall ensure that all video programming is provided in a means that is accessible to individuals who are deaf and hard of hearing either through captioning or other means of ensuring equal access.

C. The Hospital shall ensure that Patients and Companions are provided with a full and equal means for obtaining assistance from nursing and other Hospital Personnel equal to that provided through call buttons and other auditory means to hearing patients and companions, such that nursing and other Hospital Personnel respond promptly in person when called by Patients and Companions in room identified as having such deaf or hard of hearing individuals.

18. Emergency Procedures and Alarm Systems

A. The Hospital shall ensure that all alarm systems designed to alert hospital occupants to emergencies, such as fire and tornado alarms, are equipped with appropriate strobes or other measures to ensure access for people who are deaf or hard of hearing.

19. Public Address System Announcements

A. The Hospital shall ensure that all announcements made over the public address system are accessible to individuals who are deaf or hard of hearing.

20. Miscellaneous

A. The Hospital shall not deny equal services, accommodations, or other opportunities to any individual because he or she is deaf or hard of hearing, or because of the known relationship of a person with someone who is deaf or hard of hearing.

B. The Hospital shall not retaliate against or coerce in any way any person who is trying to exercise his or her rights under this Policy.

C. Nothing in this Policy shall require the Hospital to violate its obligations under HIPAA, any other applicable privacy or confidentiality law, or laws governing emancipated minors.



21. Implementation

The Hospital shall designate one or more individuals who shall be available twenty-four (24) hours per day, seven (7) days per week, to answer questions from and provide assistance to Hospital Personnel regarding the use of auxiliary aids and services, and qualified sign language and oral interpreters available under the Policy. Such individuals shall know where the appropriate auxiliary aids are stored and how to operate them. The Hospital shall circulate and post broadly within the Hospital the telephone numbers and e-mail addresses of the individuals to contact for auxiliary aids and services, that may be used by Patients and/or Companions in order to obtain the assistance of such individuals.



## Exhibit A

### Deaf or Hard of Hearing Communication Request Form

We ask this information so that we can communicate effectively with patients and/or companions who are deaf or hard of hearing. All communication aids and services are provided FREE OF CHARGE. Each person requesting communication aids should complete a separate form. If you need further assistance, please contact \_\_\_\_\_.

\_\_\_\_\_  
Patient's Name

\_\_\_\_\_  
Medical Record #

\_\_\_\_\_  
Name of Person with Disability (if different than patient)

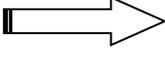
#### Nature of Disability:

- Deaf     Hard of Hearing     Speech Impairment     Other: \_\_\_\_\_

#### Relationship to Patient:

- Self     Family member     Friend     Other: \_\_\_\_\_

Please select the communication aid(s) you would like to assist you in communicating with Hospital staff. Your requests will be carefully addressed by Hospital staff.

- |  |   |   |  |  |                                   |
|--|---|---|--|--|-----------------------------------|
| <input type="checkbox"/> On-site Interpreter  |  | <input type="radio"/> American Sign Language (ASL)                    | <input type="radio"/> Signed English                           | <input type="radio"/> Oral interpreter               | <input type="radio"/> Cued Speech |
| <input type="checkbox"/> Video Remote Interpreter (VRI)  |  | <input type="radio"/> American Sign Language (ASL)                    | <input type="radio"/> Signed English                           | <input type="radio"/> Oral interpreter               | <input type="radio"/> Cued Speech |
| <input type="checkbox"/> Videophone (VP)   | <input type="checkbox"/> TTY/TDD (text telephone)                                   | <input type="checkbox"/> Caption telephone                            | <input type="checkbox"/> Telephone compatible with hearing aid | <input type="checkbox"/> Telephone handset amplifier |                                   |
| <input type="checkbox"/> Flasher for incoming calls (in patient's room)  |   | <input type="checkbox"/> Assistive listening device (sound amplifier) |  |  |                                   |

Other. Explain:



- No. I do not use sign language and/or do not use interpreters.
- No. I prefer to have only family members/friends help with communication.

Name of family member/friend: \_\_\_\_\_

- No. Please state other reason: \_\_\_\_\_

**If you requested both an interpreter on-site and a video remote interpreter above, do you have a preference between the two?**

- Yes, I prefer an interpreter on-site
- Yes, I prefer video remote interpreter
- No, I do not have a preference between the two

If you have any questions, please call \_\_\_\_\_ (voice/VRS), \_\_\_\_\_ (TTY).

**Completed by:** \_\_\_\_\_  
(Please print name)

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**\*\* If at any point during your Hospital visit, you wish to change any of the answers to the questions on this form, please notify \_\_\_\_\_.**

**For Official Use Only**

- Anticipated period of time the patient will be in the hospital (if known): \_\_\_\_\_
- (dx date): \_\_\_\_\_
- The nature of the patient’s condition, including its seriousness and stability: \_\_\_\_\_
- Likelihood of needing to communicate with the Patient or Companion at unforeseen times: \_\_\_\_\_
- In this unit, the most common hours that Hospital Personnel will need to communicate with patients or companions (list out in two hour time frames): \_\_\_\_\_
- Interpreter services are available 24 hours free of charge.
- Other assistive devices which may be available: \_\_\_\_\_





## Exhibit C



Sign Language Interpreter?

yes



no





## Exhibit D

### Use of Video Remote Interpreting (VRI)

A comprehensive VRI policy should implement VRI as a last resort subject to very specific conditions. In particular, medical providers should provide VRI only if on-site qualified interpreter services are not immediately available and with the consent of the patient. On-site interpreter services are more likely to result in effective communication than VRI services. On-site interpreters are advantageous in that they: have more mobility, have greater access to visual and auditory cues and information present in the environment, are not disconnected due to malfunctions, and are better able to respond immediately to communication events as they arise.

As a matter of model policy, medical providers should only use VRI: (i) while the medical provider is waiting for an on-site interpreter to arrive (which should be no more than two hours from the time of request for unscheduled medical events); (ii) if duration of the patient's stay is expected to be under two (2) hours; (iii) if a need to communicate with a patient and/or companion who has expressed a preference for an on-site interpreter arises outside of a planned schedule for an interpreter to be provided for a patient and/or companion; or (iv) either (a) the patient has not expressed a preference for an on-site interpreter or (b) the patient's and/or companion's expressed preference for an on-site interpreter has been considered and VRI results in effective communication.

The following are minimum requirements for the use of VRI in medical situations involving deaf individuals but are neutral with respect to the brand of VRI technology and equipment used.

#### Minimum Requirements for VRI Technology and Equipment

The following is a non-exhaustive list of minimum requirements specifically related to VRI technology and equipment:

##### *Network*

- The medical provider must have a dedicated high-speed (broadband) Internet connection and devote sufficient exclusive bandwidth for the delivery of VRI services to ensure high quality, clear, delay-free, full-motion video and high-quality audio. Due to the importance of ensuring clear communications during critical medical situations, only high definition video transmissions should be allowed for VRI technology in medical situations.
- To support high definition video transmissions on both ends, every endpoint must support at least 1024k video calling and be uninterrupted and continuous, with an IP overhead of 1.2M Ethernet connection.
- There should be a dedicated connection to a WAN circuit with Quality of Service (QoS) settings that take into account the potential number of concurrent video calls over the WAN and the quality settings for each call.



- The VRI equipment needs to have the capability to safely traverse firewalls without compromising security. The optimal means to achieve this is by connecting the VRI equipment through centralized equipment via a WAN circuit. At least “Outbound Only” ports must be free from firewalls.
- Every endpoint used for VRI, regardless of type (room-based all-inclusive unit or software/computer-based) must support encrypted transmissions, preferably using 256-bit Advanced Encryption Standard (AES-256).
- All endpoints should be able to place and receive video calls using Uniform Resource Identifiers (URIs).
- All connections should require an IPSEC or SSL VPN to comply HIPAA requirements.
- There should be no interference from signals from other medical equipment (e.g. cardiac monitors).
- Connected and wireless broadband must be tested at least once a week to ensure smooth transmission.
- The VRI provider chosen by the medical provider must ensure their video interpreters meet the same minimum technical standards from their end.

### *Equipment*

- The deaf or hard of hearing individual must be positioned properly and comfortably to have an unobstructed view of the video screen; the equipment must provide clear, sufficiently large, and sharply delineated pictures of the interpreter’s and the deaf or hard of hearing individual’s head, arms, hands, and fingers.
- The video screen should be a flat-panel, LCD computer monitor, with a minimum screen size of 19.5 inches (measured diagonally from corner to corner) for viewing from no more than 2 feet from the patient and should be hands-free for the patient. However, the video screen must support high definition video transmissions.
- The video screen must be flexible and stable for the user with adjustable height options, including the capacity to adjust the screen in various directions for optimal viewing by the patient regardless of the patient’s position and to place the screen directly overhead, without needing to move the deaf or hard of hearing individual's head.
- To support high definition video transmissions, the video cameras at all endpoints should have a minimum video resolution of 720p (1280 x 720 pixels, progressive, at 30 frames per second. The ideal resolution is 1080p30, 1080p50, or 1080p60 (1920 x 1080 pixels, progressive, at 30, 50, or 60 frames per second, respectively).
- All parties’ video cameras (at all endpoints) should be capable of a minimum video resolution of 720p (1280 x 720 pixels, progressive, at a speed of at least 30 frames per second). At the present time, the ideal resolution is 1080p60 (1920 x 1080 pixels, at 60 frames per second). The cameras should use progressive scan instead of interlaced scan to preserve smoothness and clarity of image and to reduce any possible artifacts or judder.
- The video cameras should be focused on all stakeholders, but particularly the deaf individual(s) involved and the interpreter(s). A clear view of the signer(s) is required. Medical provider staff must be able to adjust the physical position of the camera; and the medical provider and/or video interpreter must be able to make adjustments in the camera angle (left/right, up/down, wide angle versus close-up view) and focus; and the video interpreter must be able to see the deaf or hard of hearing individual clearly.



- Deaf and hard of hearing patients, whenever possible, should be placed in a private room to minimize visual distractions and to improve quality of VRI communications.
- Lighting in the room must be optimal with no backlighting on the signing individual.
- The VRI audio equipment should allow for a clear and easily understood transmission of voices. The video interpreter and the medical provider staff must communicate consecutively and be able to hear each other clearly. Background noise should be kept to a minimum through noise cancelling features, and preferably with use of microphones for the medical staff to speak into for clarity purposes.
- A speakerphone is not recommended unless only one hearing individual is using it and the speakerphone is in that individual's immediate proximity.
- The computer supporting the VRI equipment on all endpoints should have at a minimum the following specifications:
  - 2.6 GHz processor speed;
  - 8 GB of physical RAM;
  - 500 GB of space available on the hard drive;
  - a dedicated video card;
  - at least one USB 2.0 port.
- The computers supporting the VRI equipment at all endpoints shall have in operation only those programs and features running for the purpose of ensuring the effective and smooth operation of the VRI communications. The medical provider shall ensure that there are no interruptions in communication with the computer or VRI technology during the VRI sessions. Any computer equipment associated with the VRI technology shall have all other programs and screensavers turned off during the VRI session.
- The ability to fit and move around VRI equipment within a given space should be a factor in deciding room assignments.
- VRI equipment and all technology supporting it including the computer must be tested at least once a week.
- Medical providers should have additional VRI equipment beyond the number estimated necessary to serve the local deaf and hard of hearing population. It is recommended that medical providers purchase twice the number of VRI equipment that is deemed necessary by the medical providers. The additional VRI equipment would serve as back up equipment in the event that any of the VRI equipment breaks or there is an unanticipated number of deaf or hard of hearing patients or companions at the medical facility at the same time.

### **Minimum Requirements for Video Interpreters**

- At all times, the video interpreter must be able to accurately, effectively, and impartially interpret all communications between the deaf and hard of hearing patient and/or companion and the medical provider staff/contracting medical personnel. Moreover, the qualifications of the video interpreter should comport with state licensure laws, if any, that affect sign language interpreters in medical settings in that state.



- Per the applicability of the Human Resources Standards outlined by The Joint Commission to all interpreters as contracted personnel engaged in providing services for a healthcare facility, all VRI providers must be able to, upon request, provide the following for each of their interpreters:
  - Education and training that is consistent with applicable legal and regulatory requirements and organization policy, and specifically in medical terminology;
  - Appropriately certified by a national certifying body, and appropriately trained to provide interpreting services in medical settings including familiarity with medical terminology;
  - Evidence of license or registration, as required by the state in which the site of medical services is located, if the state has any, regardless of where the video interpreter is located;
  - Evidence that individual's knowledge and experience and competence are appropriate for his or her assigned responsibilities as required by the contracting organization;
  - Orientation to the contracting organization;
  - Evaluations of performance;
  - Health status as required by job responsibilities, as defined by the organization, and as required by law and regulation;
  - Criminal background check or pre-employment verification of convictions for abuse or neglect, when required by law and regulation; and
  - References, when applicable.<sup>1</sup>
- Video interpreters must act in accordance with any applicable codes of professional conduct, such as a certifying body's Code of Professional Conduct or the statutory requirement of a state's interpreter licensure law.
- Video interpreters must inform the medical provider to terminate the use of VRI technology and obtain the services of an on-site interpreter, when such interpreters determine that VRI is not an appropriate accommodation and is not ensuring effective communication.
- The medical provider may honor but shall not be bound by the personal preferences of a deaf or hard of hearing patient and/or companion for a particular named video interpreter, vendor or agency. However, the medical provider shall honor the preference of the deaf or hard of hearing patient and/or companion with respect to the gender of the video interpreter.
- Prior to rendering interpreting services, the video interpreter should be provided with brief and pertinent background information of the communicative encounter, including but not limited to: patient-specific information and concerns the medical provider will address.
- When it is necessary to transfer an interpreted session, or when an interpreted session is terminated and reestablished with a new interpreter, the previous interpreter will use HIPAA compliant internal communication systems to share pertinent information with the next interpreter. When necessary, the parties should not be placed on hold for more than one minute.
- All video interpreters utilized in the provision of VRI services must be fully versed and trained on the operation and maintenance of the technical video equipment at their location. This includes the ability to do basic troubleshooting to

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<sup>1</sup> See [http://www.calhospital.org/sites/main/files/file-attachments/The\\_Joint\\_Commission\\_-\\_Standards\\_FAQ\\_Chapter.pdf](http://www.calhospital.org/sites/main/files/file-attachments/The_Joint_Commission_-_Standards_FAQ_Chapter.pdf)



resolve any technical problems as well as the ability to transfer a VRI assignment to another available video interpreter if unable to immediately resolve the technical problems.

- The VRI service needs to ensure that a video interpreter answers the call within 45 seconds on a 24-hour basis every day without exception.
- The VRI service should ensure that no video interpreter is providing interpreting services longer than sixty minutes without a break and require transfers to other video interpreters when necessary.
- The use of Certified Deaf Interpreters (CDIs) should be made available upon request of the patient(s) or companion(s), or when assessed as necessary by the video interpreter(s). In many situations, it may be necessary to pair VRI usage with an on-site CDI.

### Minimum Requirements for Procedures and Staff Training

- All employees who deal directly with patients and/or provide medical services, including physicians, nurses, physician's assistants, and admitting personnel, shall receive written instructions regarding which personnel to contact if they encounter a patient or companion who appears to be deaf or hard of hearing. The medical provider shall also provide such written instructions to any new registration or clinical contract staff who deal directly with patients and/or provide medical services upon or prior to the commencement of their first shift.
- For scheduled appointments for which the patient and/or companion has already agreed to VRI, the VRI equipment must be set up in the designated room and be ready to operate at the time of the appointment.
- For unscheduled visits, the medical provider shall take the following steps at the arrival of a deaf or hard of hearing individual:
  - If a patient is being transported to the medical provider by Emergency Medical Services (EMS), then the EMS must call the medical provider en route to inform the medical provider that a deaf and hard of hearing individual who requests or requires a sign language interpreter will arrive. The medical provider staff will then need to arrange for a qualified on-site interpreter immediately. If an on-site interpreter is not immediately available, the medical provider staff should then immediately call the VRI provider and ensure that the VRI equipment is set up to deliver VRI services by the time the ambulance and deaf or hard of hearing individual arrive.
  - In other instances not involving EMS, upon the initial contact<sup>2</sup> with the deaf or hard of hearing individual, the medical provider shall inquire into whether the patient and/or companion is/are deaf or hard of hearing;
  - If it is determined that the patient and/or companion is/are deaf or hard of hearing, the medical provider shall present auxiliary aids and services options to the deaf or hard of hearing individual(s);
  - If the deaf or hard of hearing individual requests an on-site interpreter, the medical provider will contact the appropriate personnel in charge of placing interpreter requests immediately;
  - The medical provider shall provide any available on-site interpreters<sup>3</sup> in a timely manner;

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<sup>2</sup> Initial contacts include phone calls in advance of arrivals.

<sup>3</sup> The medical provider shall maintain at least one contract with a local interpreting services provider.



- The medical provider shall not attempt to discourage or dissuade deaf and hard of hearing patients and companions from requesting an on-site interpreter.
- In the interim period while waiting for the on-site interpreter(s) to arrive, the medical provider may use VRI as a temporary measure.
- If the deaf or hard of hearing individual requests VRI or consents to VRI, the medical provider must initiate the VRI protocol immediately.
- The medical provider shall take the following steps when using VRI:
  - VRI equipment must be brought to the room within ten minutes of the arrival of a deaf or hard of hearing individual.
  - Set-up of equipment should be completed and operable within five minutes.
  - A video interpreter must appear on the screen ready to interpret within three minutes after the VRI machine has been set up.
  - The medical provider representative who connects to the VRI should provide a brief summary of the discussion about to take place immediately after connecting to the video interpreter to provide context.
  - At all times the medical provider must monitor the effectiveness of the use of VRI based on the factors listed *supra*.
- The medical provider shall take the following corrective actions whenever necessary:
  - If problems arise with the VRI and they are not remedied within ten minutes, the medical provider shall call for technical support.
  - Once the medical provider contacts technical support to fix any VRI problems, the medical provider shall call an on-site interpreter within 30 minutes of when VRI problems are first identified unless such problems are fully resolved within that time frame. If VRI problems recur, the medical provider shall call an on-site interpreter immediately unless the patient or companion explicitly requests otherwise.
- The medical provider shall not impose a time limit for VRI usage. For any conversation involving VRI, the medical provider shall proceed for as long as necessary to ensure that the discussions are as comprehensive as allowed for hearing patients and/or companions.
- The medical provider shall conduct initial and periodic communication assessments of the effectiveness of the use of VRI throughout the deaf or hard of hearing individual's visit.
- The medical provider must consider the reasonably foreseeable health activities of the patient involved (e.g., group therapy sessions, medical tests or procedures, rehabilitation services, meetings or discussions with health care professionals or social workers concerning billing, insurance, self-care, prognoses, history, discharge, or other matters) and prepare for appropriate provisions of auxiliary aids and services.
- The following personnel must be available on-site 24 hours a day, 7 days a week:
  - One or more designated individual(s) to answer questions from and provide assistance to personnel regarding the use of auxiliary aids and services. Such individuals shall know where the appropriate auxiliary aids are stored and how to operate them. Such individuals shall also know how to procure the appropriate auxiliary services.



- Appropriate personnel able to conduct analysis regarding the linguistic and medical demands of the conversation before offering VRI. Said personnel must consider all the criteria discussed in this document and must be able to identify when VRI is not facilitating effective communication.
- At least two individuals fully trained on procedures for setting up VRI equipment and contacting the VRI provider.
- At least one information technology (IT) staff to troubleshoot and resolve technology and equipment problems that may arise.
- The medical provider shall circulate and post broadly within the facility the telephone numbers and e-mail addresses of the individuals above. The contact information of the individual(s) responsible for communication assessments should be shared with patients and/or companions in order to obtain the assistance of such individuals.
- Medical providers should conduct staff and contractors training on the use of VRI guidelines as well as the use of medical providers' VRI equipment *before* implementing VRI usage. The medical providers should also conduct periodic annual refresher trainings.
- The medical provider shall distribute a set of training materials to all affiliated physicians. These materials shall contain at least the provider's policy statement and any relevant forms, as well as a description of the medical provider's duty to provide auxiliary aids and services to patients and/or companions and the procedures for arranging interpreter services.
- The training sessions should meet the following objectives: to inform them of the procedures set forth in its VRI policy; to inform them of the procedures that they should follow in order to arrange interpreter services or other auxiliary aids and services; to educate them that the medical provider offers interpreters to patients and/or companions based on the patient's and/or companion's wishes or if circumstances indicate that a patient or companion needs or desires an interpreter; and to educate medical personnel on their obligations. This training shall be given to the following persons:
  - Employees with or likely to have direct patient care responsibility, including, without limitation, the following categories and their equivalents: nurses, nurse's aides, therapists, social workers, case managers, and medical technicians; and
  - Key employees not otherwise trained as provided above, including: all clinical directors and nursing supervisors; all senior-level administrators; inpatient registration personnel, outpatient registration personnel, the General Information desk; all triage nurses and other triage professionals; administrative heads and desk clerks of units or departments where such individuals are likely to have communications with patients or their companions, families and friends; and
  - All other personnel charged with decision-making involving VRI and the handling of VRI technology and equipment.
- Training must include where the equipment is, whether it is stored or in use; where it can be used; how to set it up; and how to access an interpreter. Such training should be incorporated in the required annual medical provider staff training and testing and should include regular hands-on training to be most effective.
- If the commencement or reactivation of service of any of the identified personnel above occurs after VRI implementation, the medical provider shall provide the training specified above within sixty (60) days of such date.



## **Minimum Factors to Consider**

In assessing the appropriateness of VRI, the medical provider must consider the following factors. If any of these factors are present, the medical provider should refrain from using VRI and employ best efforts to seek an on-site interpreter. Primary consideration should be granted to deaf or hard of hearing individual's express request for a specific version of qualified sign language interpreting services.

- Whether the deaf or hard of hearing individual consents to the use of VRI, with the understanding that the initial consent does not constitute a waiver of right to effective communication via on-site interpreter.
- Whether the VRI provider offers the language that the deaf or hard of hearing individual uses: for example, standard American Sign Language (ASL) or other sign languages /visual communication systems;
- The deaf or hard of hearing individual's fluency in the communication system used;
- Whether the patient's condition is serious and/or unstable;
- Whether the deaf or hard of hearing individual is limited in her or his ability to view the video interpreter, due to vision limitations, limited head/body mobility, physical obstacles, distance between the individual and the screen, her or his ability to stay still, or any other reasons;
- The video interpreter's ability to view the deaf or hard of hearing individual, due to limitations on the deaf or hard of hearing individual's ability to move her or his head, hands, arms; any physical obstacles; the distance between the individual and the screen, the ability of the deaf or hard of hearing individual to stay still; or for any other reasons;
- Whether the deaf or hard of hearing individual's state of mind impacts her or his ability to communicate;
- Any cognitive or consciousness issues, psychiatric issues, or pain issues that the deaf or hard of hearing individual may have;
- Whether the deaf or hard of hearing individual is under the influence of medicine or other drugs;
- Whether the deaf or hard of hearing individual's emotional state impacts her or his ability to communicate;
- Whether the degree of pain and/or discomfort the deaf or hard of hearing individual may be experiencing impacts her or his ability to communicate;
- Whether the deaf or hard of hearing individual's ability to focus on the VRI screen impacts her or his ability to communicate;
- Whether the deaf or hard of hearing individual is a minor;
- Whether there are multiple people present;
- Whether information exchanges are complex and/or fast;
- Whether the discussions involve high-risk situations, including but not limited to: informed consent discussions, discussions regarding surgery or other high-risk treatment options, discussions immediately prior to and after surgery or other high-risk treatment, and discussions about diagnosis, treatment, and prognosis;



- Whether the discussions involve highly sensitive communications, including but not limited to: diagnosis, treatment, prognosis of a life-threatening or life-changing illness, discussions regarding limb amputation or organ removal, and discussions regarding hospice and/or other end-of-life considerations;
- Whether the deaf or hard of hearing individual reacts negatively and/or becomes exceedingly stressed with the use of VRI;
- Whether the communication is taking place in areas of the facility that do not have readily accessible Internet access;
- Whether the treatment is taking place in a room where there are space restrictions that render the use of VRI difficult.

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# Minimum Standards for Video Remote Interpreting Services in Medical Settings

**NAD-Deaf Seniors of America (DSA) Position Statement on Minimum Standards for Video Remote Interpreting Services in Medical Settings**

**Overview**

## VRI Position Statement 1 of 7



The Americans with Disabilities Act (ADA) [1] and Rehabilitation Act of 1973[2] require hospitals and medical providers to ensure effective communication with people who are deaf.[3] For deaf people who communicate primarily in sign language[4], qualified sign language interpreters[5] are often the only effective communication option in medical settings. Failing to obtain qualified interpreters for medical interpreting puts patients' health at risk, increases liability for hospitals and medical providers, and drives up medical costs. Miscommunication also increases overall liability among hospitals and medical staff. One way to minimize these risks is to provide a qualified sign language interpreter on-site or to hire sign language fluent medical staff. However, there are situations when this may not be possible. For example, qualified sign language interpreters may not be available for an appointment or there may be a need for urgent communication in an emergency situation with a medically unstable patient. Technology now provides for an interim solution in the form of off-site or remote interpreting services when in-person, on-site interpreting may not be immediately available. Interpreting services provided remotely through such technology is known as Video Remote Interpreting (VRI).

Video Remote Interpreting (VRI) is one possible means of providing interpreting services to ensure effective communication with deaf and hard of hearing individuals who communicate using sign language.[6] VRI uses videoconferencing technology, equipment, and a high-speed Internet connection with sufficient bandwidth to provide the services of an interpreter, usually located at a call center, to people at a different location.

VRI is currently being used in a wide variety of settings including hospitals, physicians' offices, mental health care settings, police stations, schools, financial institutions, and workplaces. Entities may contract for VRI services to be provided by appointment or to be available "on demand" 24 hours a day, seven days per week.

### **Controversial Increased Use of VRI in Medical Setting**

However, the most controversial use of VRI has been in the medical setting, where use of VRI has exploded without input from the deaf and hard of hearing community and without meaningful regulation of how VRI technology is used in this setting.

Many medical providers[7] are unprepared for this technology and do not have the benefit nor include the direct involvement of the deaf and hard of hearing community in deciding how to best provide this service. In the last few years, too many medical providers have suddenly chosen VRI as the sole auxiliary aid option in the healthcare context, and the limitation to a sole option is completely inappropriate. The deaf and hard of hearing community has become increasingly concerned about the over-reliance on this new technology without a thorough examination and dialogue on the appropriateness of the service. Moreover, because so many deaf and hard of hearing individuals have had adverse experiences in hospitals that rely on VRI technology, there have been numerous lawsuits against hospitals seeking to curtail such overuse of VRI.

As a result, the National Association of the Deaf (NAD) and Deaf Seniors of America (DSA) present this position statement to guide healthcare providers to use in adopting internal VRI policies that best meet the communication needs of deaf and hard of hearing patients and companions.[8] Additionally, the NAD has a Model Policy for Effective Communication in Hospitals[9] that should guide all medical providers in the development of overall effective communication policies in their operations and provision of services to deaf and hard of hearing individuals.

### **Assessing Communication Needs and VRI as a Last Resort**



Because communication methods vary from person to person within the deaf and hard of hearing population, the medical provider must determine which communication method is most effective for the patient being admitted or seen. A deaf or hard of hearing individual knows best which auxiliary aid or service will achieve effective communication with their health care provider. Private medical providers

must consult with deaf and hard of hearing persons to determine effective communication needs.[10] Medical providers must give primary consideration to the communication requests of the deaf or hard of hearing individual.[11]

At a minimum, medical providers should present every deaf and hard of hearing patient or companion with a Deaf or Hard of Hearing Communication Request Form, whether in paper or electronic form. A model of such a communication request form is provided as Exhibit A of the NAD Model Policy for Effective Communications in Hospitals (<https://www.nad.org/wp-content/uploads/2020/04/Model-Hospital-Policy.pdf>).

Throughout the entire visit, the medical provider should conduct periodic communication assessments of the deaf or hard of hearing individual(s) involved, including consultation with the deaf or hard of hearing individual(s) about the effectiveness of the communication. The medical provider should make provide the communication request form periodically through the deaf person(s) during their stay or visit and make adjustments based on such assessments to the provision of auxiliary aids and services.

For deaf and hard of hearing people who communicate in sign language, qualified sign language interpreters[12] may be the only effective communication option. The provision of qualified sign language interpreters is critical to ensure that deaf and hard of hearing persons who rely on sign language are able to communicate effectively with health care providers. The U.S. Department of Health and Human Services, Office of Civil Rights has consistently required medical providers to provide qualified interpreters to deaf and hard of hearing clients, and has stated that “it would be extremely difficult for the health care provider to demonstrate in certain service settings, that effective communication is being provided in the absence of . . . interpreters.”[13]

Although the Department of Justice (DOJ) has developed regulations recognizing Video Remote Interpreting (VRI) as one possible auxiliary aid or service option,[14] medical centers have mistaken this inclusion of VRI as license to use VRI exclusively to the detriment of effective communication, which is the paramount requirement when providing medical services to deaf and hard of hearing patients and companions.[15] There have been numerous instances of medical providers insisting that they are only obligated to provide VRI, and not obligated to provide on-site interpreters at all. This insistence has led to communication failures not only because of a refusal to recognize that VRI is not appropriate for many medical situations but also because the VRI technology has often not worked as promised. As a result, medical providers’ insistence on the exclusive use of VRI has led to numerous communication failures and lawsuits.

In its regulations implementing Titles II and Title III of the ADA, the DOJ issued the following minimum requirements for VRI use by covered entities:

*[VRI must provide] real-time, full-motion video and audio over a dedicated high-speed, wide-bandwidth video connection or wireless connection that delivers high-quality video images that do not produce lags, choppy, blurry, or grainy images, or irregular pauses in communication. [VRI must provide a] sharply delineated image that is large enough to display the interpreter's face, arms, hands, and fingers, and the participating individual's face, arms, hands, and fingers, regardless of [their] body position. [VRI must also provide] a clear, audible transmission of voices. [16]*

However, given the sheer volume of VRI-related complaints that the NAD and DSA receive, medical providers have often failed to ensure that the VRI technology contracted for satisfy such general regulatory requirements. The DOJ regulations mandate minimum performance standards but do not specify the exact technological standards necessary to achieve these performance requirements.

Without comprehensive technical guidance on the use of VRI, medical providers are at significant risk of facing liability because of miscommunication or because of a failure to allow the patient to fully participate in decision making about the health care. A comprehensive VRI policy should implement VRI as a last resort subject to very specific conditions. In particular, medical providers should provide VRI only if on-site qualified interpreters services are not immediately available and with the consent of the patient. On-site interpreter services are more likely to result in effective communication than VRI services. On-site interpreters are advantageous in that they: have more mobility, have greater access to visual and auditory cues and information present in the environment, are not disconnected due to malfunctions, and are better able to respond immediately to communication events as they arise.

As a matter of model policy, medical providers should only use VRI: (i) while the medical provider is waiting for an on-site interpreter to arrive (which should be no more than two hours from the time of request for unscheduled medical events); (ii) if duration of the patient's stay is expected to be under two (2) hours; (iii) if a need to communicate with a patient and/or companion who has expressed a preference for an on-site interpreter arises outside of a planned schedule for an interpreter to be provided for a patient and/or companion; or (iv) either (a) the patient has not expressed a preference for an on-site interpreter or (b) the patient's and/or companion's expressed preference for an on-site interpreter has been considered and VRI results in effective communication.

Where it is necessary to provide VRI for a deaf patient or companion after these conditions are met, it is imperative that the VRI technology be in excellent working order. At the present time, medical providers are not being given guidance on what is required for optimal VRI technology to be prepared for medical situations involving deaf and hard of hearing individuals.

### **Minimum Requirements for VRI Technology and Equipment**

## VRI Position Statement 3 of 7



The NAD and DSA provide the following minimum technical requirements for the use of VRI in medical situations involving deaf individuals, but are neutral with respect to the brand of VRI technology and equipment used. The following is a non-exhaustive list of minimum requirements specifically related to VRI technology and equipment:

### *Network*

- The medical provider must have a dedicated high-speed (broadband) Internet connection and devote sufficient exclusive bandwidth for the delivery of VRI services to ensure high quality, clear, delay-free, full-motion video and high quality audio. Due to the importance of ensuring clear communications during critical medical situations, only high definition video transmissions should be allowed for VRI technology in medical situations.
- To support high definition video transmissions on both ends, every endpoint must support at least 1024k video calling and be uninterrupted and continuous, with an IP overhead of 1.2M Ethernet connection.
- There should be a dedicated connection to a WAN circuit with Quality of Service (QoS) settings that take into account the potential number of concurrent video calls over the WAN and the quality settings for each call.
- Firewalls must not impede or impair optimal video transmission yet security requirements, such as those of HIPAA, should not be compromised. The ideal means to achieve this is by connecting the VRI equipment through centralized equipment via a WAN circuit.
- Every endpoint used for VRI, regardless of type (room-based all-inclusive unit or software/computer-based) must support encrypted transmissions, preferably using 256-bit Advanced Encryption Standard (AES-256).
- All endpoints should be able to place and receive video calls using Uniform Resource Identifiers (URIs).
- All connections should require an IPSEC or SSL VPN to comply HIPAA requirements.

- There should be no interference from signals from other medical equipment (e.g. cardiac monitors), wireless equipment, and other networks.
- Connected and wireless broadband must be tested at least once a week to ensure smooth transmission.
- The VRI provider chosen by the medical provider must ensure their video interpreters meet the same minimum technical standards from their end.

### *Equipment*

- The video cameras should be focused on all stakeholders, but particularly the deaf individual(s) involved and the interpreter(s). The deaf or hard of hearing individual must be positioned properly and comfortably to have an unobstructed view of the video screen; the equipment must provide clear, sufficiently large, and sharply delineated pictures of the interpreter's and the deaf or hard of hearing individual's head, arms, hands, and fingers.
- The video screen should be a flat-panel, LCD computer monitor, with a minimum screen size of 19.5 inches (measured diagonally from corner to corner) for viewing from no more than 2 feet from the patient, and should be hands-free for the patient. However, the video screen must support high definition video transmissions.
- The video screen must be flexible and stable for the user with adjustable height options, including the capacity to adjust the screen in various directions for optimal viewing by the patient regardless of the patient's position and to place the screen directly overhead, without needing to move the deaf or hard of hearing individual's head.
- All parties' video cameras (at all endpoints) should be capable of a minimum video resolution of 720p (1280 x 720 pixels, progressive, at a speed of at least 30 frames per second) to support high definition video transmissions. At the present time, the ideal resolution is 1080p60 (1920 x 1080 pixels, at 60 frames per second). The cameras should use progressive scan instead of interlaced scan to preserve smoothness and clarity of image and to reduce any possible artifacts or judder.
- Deaf and hard of hearing patients, whenever possible, should be placed in a private room to minimize visual distractions and to improve quality of VRI communications.
- Lighting in the room must be optimal with no backlighting on the signing individual.
- The VRI audio equipment should allow for a clear and easily understood transmission of voices. The video interpreter and the medical provider staff must communicate consecutively and be able to hear each other clearly. Background noise should be kept to a minimum through noise cancelling features, and preferably with use of microphones for the medical staff to speak into for clarity purposes.
- A speakerphone is not recommended unless only one hearing individual is using it and the speakerphone is in that individual's immediate proximity.
- The computer supporting the VRI equipment on all endpoints should have at a minimum the following specifications:
  - 2.6 GHz processor speed;
  - 8 GB of physical RAM;

- 500 GB of space available on the hard drive;
- a dedicated video card;
- at least one USB 2.0 port.
- The computers supporting the VRI equipment at all endpoints shall have in operation only those programs and features running for the purpose of ensuring the effective and smooth operation of the VRI communications. The medical provider shall ensure that there are no interruptions in communication with the computer or VRI technology during the VRI sessions. Any computer equipment associated with the VRI technology shall have all other programs and screensavers turned off during the VRI session.
- The ability to fit and move around VRI equipment within a given space should be a factor in deciding room assignments.
- VRI equipment and all technology supporting it including the computer must be tested at least once a week.
- Medical providers should have additional VRI equipment beyond the number estimated necessary to serve the local deaf and hard of hearing population. It is recommended that medical providers purchase twice the number of VRI equipment that is deemed necessary by the medical providers. The additional VRI equipment would serve as back up equipment in the event that any of the VRI equipment breaks or there is an unanticipated number of deaf or hard of hearing patients or companions at the medical facility at the same time.

### **Minimum Requirements for Video Interpreters**



- At all times, the video interpreter must be able to accurately, effectively, and impartially interpret all communications between the deaf and hard of hearing patient and/or companion and the medical provider staff/contracting medical personnel. Moreover, the qualifications of the video interpreter should comport with state licensure laws, if any, that affect sign language interpreters in medical settings in that state.

- Per the applicability of the Human Resources Standards outlined by The Joint Commission to all interpreters as contracted personnel engaged in providing services for a healthcare facility, all VRI providers must be able to, upon request, provide the following for each of their interpreters:
  - Education and training that is consistent with applicable legal and regulatory requirements and organization policy, and specifically in medical terminology;
  - Appropriately certified by a national certifying body, and appropriately trained to provide interpreting services in medical settings including familiarity with medical terminology;
  - Evidence of license or registration, as required by the state in which the site of medical services is located, if the state has any, regardless of where the video interpreter is located;
  - Evidence that individual's knowledge and experience and competence are appropriate for their assigned responsibilities as required by the contracting organization;
  - Orientation to the contracting organization;
  - Evaluations of performance;
  - Health status as required by job responsibilities, as defined by the organization, and as required by law and regulation;
  - Criminal background check or pre-employment verification of convictions for abuse or neglect, when required by law and regulation; and
  - References, when applicable.[17]
- Video interpreters must act in accordance with any applicable codes of professional conduct, such as a certifying body's Code of Professional Conduct or the statutory requirement of a state's interpreter licensure law.
- Video interpreters must inform the medical provider to terminate the use of VRI technology and obtain the services of an on-site interpreter, when such interpreters determine that VRI is not an appropriate accommodation and is not ensuring effective communication.
- The medical provider may honor but shall not be bound by the personal preferences of a deaf or hard of hearing patient and/or companion for a particular named video interpreter, vendor or agency. However, the medical provider shall honor the preference of the deaf or hard of hearing patient and/or companion with respect to the gender of the video interpreter.
- Prior to rendering interpreting services, the video interpreter should be provided with brief and pertinent background information of the communicative encounter, including but not limited to: patient-specific information and concerns the medical provider will address.
- When it is necessary to transfer an interpreted session, or when an interpreted session is terminated and reestablished with a new interpreter, the previous interpreter will use HIPAA compliant internal communication systems to share pertinent information with the next interpreter. When necessary, the parties should not be placed on hold for more than one minute.
- Patients and companions must be informed if quality assurance monitoring is taking place and they must have the opportunity to decline.
- All video interpreters utilized in the provision of VRI services must be fully versed and trained on the operation and maintenance of the technical video equipment at their location. This includes the ability

to do basic troubleshooting to resolve any technical problems as well as the ability to transfer a VRI assignment to another available video interpreter if unable to immediately resolve the technical problems.

- The VRI service needs to ensure that a video interpreter answers the call within 45 seconds on a 24-hour basis every day without exception.
- The VRI service should ensure that no video interpreter is providing interpreting services longer than sixty minutes without a break, and require transfers to other video interpreters when necessary.
- The use of Certified Deaf Interpreters (CDIs) should be made available upon request of the patient(s) or companion(s), or when assessed as necessary by the video interpreter(s). In many situations, it may be necessary to pair VRI usage with an on-site CDI.

### **Minimum Requirements for Procedures and Staff Training**



- All employees who deal directly with patients and/or provide medical services, including physicians, nurses, physician's assistants, and admitting personnel, shall receive written instructions regarding which personnel to contact if they encounter a patient or companion who appears to be deaf or hard of hearing. The medical provider shall also provide such written instructions to any new registration or clinical contract staff who deal directly with patients and/or provide medical services upon or prior to the commencement of their first shift.
- For scheduled appointments for which the patient and/or companion has already agreed to VRI, the VRI equipment must be set up in the designated room and be ready to operate at the time of the appointment.
- For unscheduled visits, the medical provider shall take the following steps at the arrival of a deaf or hard of hearing individual:
  - If a patient is being transported to the medical provider by Emergency Medical Services (EMS), then the EMS must call the medical provider en route to inform the medical provider that a deaf and hard of hearing individual who requests or requires a sign language interpreter will arrive. The

medical provider staff will then need to arrange for a qualified on-site interpreter immediately. If an on-site interpreter is not immediately available, the medical provider staff should then immediately call the VRI provider and ensure that the VRI equipment is set up to deliver VRI services by the time the ambulance and deaf or hard of hearing individual arrive.

- In other instances not involving EMS, upon the initial contact[18] with the deaf or hard of hearing individual, the medical provider shall inquire into whether the patient and/or companion is/are deaf or hard of hearing;
- If it is determined that the patient and/or companion is/are deaf or hard of hearing, the medical provider shall present auxiliary aids and services options to the deaf or hard of hearing individual(s);
- If the deaf or hard of hearing individual requests an on-site interpreter, the medical provider will contact the appropriate personnel in charge of placing interpreter requests immediately;
- The medical provider shall provide any available on-site interpreters[19] in a timely manner;
- The medical provider shall not attempt to discourage or dissuade deaf and hard of hearing patients and companions from requesting an on-site interpreter.
- In the interim period while waiting for the on-site interpreter(s) to arrive, the medical provider may use VRI as a temporary measure.
- If the deaf or hard of hearing individual requests VRI or consents to VRI, the medical provider must initiate the VRI protocol immediately.
- The medical provider shall take the following steps when using VRI:
  - VRI equipment must be brought to the room within ten minutes of the arrival of a deaf or hard of hearing individual.
  - Set-up of equipment should be completed and operable within five minutes.
  - A video interpreter must appear on the screen ready to interpret within three minutes after the VRI machine has been set up.
- The medical provider representative who connects to the VRI should provide a brief summary of the discussion about to take place immediately after connecting to the video interpreter to provide context.
- At all times the medical provider must monitor the effectiveness of the use of VRI based on the factors listed *supra*.
- The medical provider shall take the following corrective actions whenever necessary:
  - If problems arise with the VRI and they are not remedied within ten minutes, the medical provider shall call for technical support.
  - Once the medical provider contacts technical support to fix any VRI problems, the medical provider shall call an on-site interpreter within 30 minutes of when VRI problems are first identified unless such problems are fully resolved within that time frame. If VRI problems recur, the medical provider shall call an on-site interpreter immediately unless the patient or companion explicitly requests otherwise.

- The medical provider shall not impose a time limit for VRI usage. For any conversation involving VRI, the medical provider shall proceed for as long as necessary to ensure that the discussions are as comprehensive as allowed for hearing patients and/or companions.
- The medical provider shall conduct initial and periodic communication assessments of the effectiveness of the use of VRI throughout the deaf or hard of hearing individual's visit.
- The medical provider must consider the reasonably foreseeable health activities of the patient involved (g., group therapy sessions, medical tests or procedures, rehabilitation services, meetings or discussions with health care professionals or social workers concerning billing, insurance, self-care, prognoses, history, discharge, or other matters) and prepare for appropriate provisions of auxiliary aids and services.
- The following personnel must be available on-site 24 hours a day, 7 days a week:
  - One or more designated individual(s) to answer questions from and provide assistance to personnel regarding the use of auxiliary aids and services. Such individuals shall know where the appropriate auxiliary aids are stored and how to operate them. Such individuals shall also know how to procure the appropriate auxiliary services.
  - Appropriate personnel able to conduct analysis regarding the linguistic and medical demands of the conversation before offering VRI. Said personnel must consider all the criteria discussed in this document and must be able to identify when VRI is not facilitating effective communication.
  - At least two individuals fully trained on procedures for setting up VRI equipment and contacting the VRI provider.
  - At least one information technology (IT) staff to troubleshoot and resolve technology and equipment problems that may arise.
- The medical provider shall circulate and post broadly within the facility the telephone numbers and e-mail addresses of the individuals above. The contact information of the individual(s) responsible for communication assessments should be shared with patients and/or companions in order to obtain the assistance of such individuals.
- Medical providers should conduct staff and contractors training on the use of VRI guidelines as well as the use of medical providers' VRI equipment *before* implementing VRI usage. The medical providers should also conduct periodic annual refresher trainings.
- The medical provider shall distribute a set of training materials to all affiliated physicians. These materials shall contain at least the provider's policy statement and any relevant forms, as well as a description of the medical provider's duty to provide auxiliary aids and services to patients and/or companions and the procedures for arranging interpreter services.
- The training sessions should meet the following objectives: to inform them of the procedures set forth in its VRI policy; to inform them of the procedures that they should follow in order to arrange interpreter services or other auxiliary aids and services; to educate them that the medical provider offers interpreters to patients and/or companions based on the patient's and/or companion's wishes or if circumstances indicate that a patient or companion needs or desires an interpreter; and to educate medical personnel on their obligations. This training shall be given to the following persons:

- Employees with or likely to have direct patient care responsibility, including, without limitation, the following categories and their equivalents: nurses, nurse's aides, therapists, social workers, case managers, and medical technicians; and
- Key employees not otherwise trained as provided above, including: all clinical directors and nursing supervisors; all senior-level administrators; inpatient registration personnel, outpatient registration personnel, the General Information desk; all triage nurses and other triage professionals; administrative heads and desk clerks of units or departments where such individuals are likely to have communications with patients or their companions, families and friends
- All other personnel charged with decision-making involving VRI and the handling of VRI technology and equipment.
- Training must include where the equipment is, whether it is stored or in use; where it can be used; how to set it up; and how to access an interpreter. Such training should be incorporated in the required annual medical provider staff training and testing, and should include regular hands-on training to be most effective.
- If the commencement or reactivation of service of any of the identified personnel above occurs after VRI implementation, the medical provider shall provide the training specified above within sixty (60) days of such date.

### **Minimum Factors to Consider**



In assessing the appropriateness of VRI, the medical provider must consider the following factors. If any of these factors are present, the medical provider should refrain from using VRI and employ best efforts to seek an on-site interpreter. Primary consideration should be granted to deaf or hard of hearing individual's express request for a specific version of qualified sign language interpreting services.

- Whether the deaf or hard of hearing individual consents to the use of VRI, with the understanding that the initial consent does not constitute a waiver of right to effective communication via on-site

interpreter.

- Whether the VRI provider offers the language that the deaf or hard of hearing individual uses: for example, standard American Sign Language (ASL) or other sign languages /visual communication systems;
- The deaf or hard of hearing individual's fluency in the communication system used;
- Whether the patient's condition is serious and/or unstable;
- Whether the deaf or hard of hearing individual is limited in their ability to view the video interpreter, due to vision limitations, limited head/body mobility, physical obstacles, distance between the individual and the screen, their ability to stay still, or any other reasons;
- The video interpreter's ability to view the deaf or hard of hearing individual, due to limitations on the deaf or hard of hearing individual's ability to move their head, hands, arms; any physical obstacles; the distance between the individual and the screen, the ability of the deaf or hard of hearing individual to stay still; or for any other reasons;
- Whether the deaf or hard of hearing individual's state of mind impacts their ability to communicate;
- Any cognitive or consciousness issues, psychiatric issues, or pain issues that the deaf or hard of hearing individual may have;
- Whether the deaf or hard of hearing individual is under the influence of medicine or other drugs;
- Whether the deaf or hard of hearing individual's emotional state impacts their ability to communicate;
- Whether the degree of pain and/or discomfort the deaf or hard of hearing individual may be experiencing impacts their ability to communicate;
- Whether the deaf or hard of hearing individual's ability to focus on the VRI screen impacts their ability to communicate;
- Whether the deaf or hard of hearing individual is a minor;
- Whether there are multiple people present;
- Whether information exchanges are complex and/or fast;
- Whether the discussions involve high-risk situations, including but not limited to: informed consent discussions, discussions regarding surgery or other high-risk treatment options, discussions immediately prior to and after surgery or other high-risk treatment, and discussions about diagnosis, treatment, and prognosis;
- Whether the discussions involve highly sensitive communications, including but not limited to: diagnosis, treatment, prognosis of a life-threatening or life-changing illness, discussions regarding limb amputation or organ removal, and discussions regarding hospice and/or other end-of-life considerations;
- Whether the deaf or hard of hearing individual reacts negatively and/or becomes exceedingly stressed with the use of VRI;
- Whether the communication is taking place in areas of the facility that do not have readily accessible Internet access;
- Whether the treatment is taking place in a room where there are space restrictions that render the use of VRI difficult.

## Conclusion

### VRI Position Statement 7 of 7



As technology and services are consistently evolving, it is critical to engage the deaf or hard of hearing community when adopting new technology and services to ensure that it is aligned with their goals. Medical providers planning to implement VRI services should consult with deaf and hard of hearing individuals in their community. Additionally, medical providers should conduct regular outreach and education programs to introduce the system to the community. These education programs should include the medical provider's policy and procedures on providing and using VRI services and the provision of on-site interpreters; how deaf and hard of hearing individuals should notify medical provider staff when VRI services do not result in effective communication; which staff position (staffed 24/7) is responsible for conducting and reviewing communication assessments and the provision of auxiliary aids and services, including VRI services; and how to file complaints and use the grievance system when necessary. Medical providers should make their VRI policies available on their websites and patient handbooks.

VRI is a technological tool that may be used by medical providers to ensure immediate communication access with deaf and hard of hearing individuals who communicate in sign language. It is the position of the NAD and DSA that the use of on-site qualified sign language interpreters should always be the first approach with deaf and hard of hearing patients and companions who use sign language. When VRI is used in the absence of any available on-site interpreter, it must be used properly in terms of policy, procedure, and technology. Failure to conform to these standards is not only a failure to ensure effective communication under federal law but also creates unnecessary risks to the medical welfare and health care of deaf and hard of hearing individuals.

*This position statement was prepared by the NAD-DSA VRI Task Force, and approved on July 1, 2016 by the NAD Board of Directors.*

## References:

1. See *US DOJ Effective Communication Regulations*, available at: [www.ada.gov/effective-comm.htm](http://www.ada.gov/effective-comm.htm)
2. See *Recommended Guidelines for Video Remote Interpreting (VRI) for ASL-Interpreted Events*, Judicial Council of California, 2012.
3. NAD Position Statement: VRI Services in Hospitals. See <https://www.nad.org/issues/technology/vri/position-statement-hospitals> (last visited May 16, 2016).

*Updated February 13, 2018*

[1] 42 U.S.C. § 12101, *et seq.*

[2] 29 U.S.C. § 701 *et seq.*

[3] For the remainder of this statement, the use of the terms “deaf” or “deaf and hard of hearing” are intended to encompass all deaf, hard-of-hearing, and DeafBlind individuals, including those with additional disabilities except where specifically distinguished.

[4] For purposes of word economy, the term “sign language” means American Sign Language (ASL) and other means of visual communication, such as signed English systems or contact sign (a combination of ASL signs and English word order, formerly called Pidgin Sign English).

[5] A “*qualified interpreter*” means an interpreter who is able to interpret effectively, accurately, and impartially, both receptively and expressively, using any necessary specialized vocabulary. See 28 C.F.R. § 35.104 and 28 C.F.R. § 36.104.

[6] For purposes of word economy, the term “sign language” means American Sign Language (ASL) and other means of visual communication, such as signed English systems or contact sign (a combination of ASL signs and English word order, formerly called Pidgin Sign English).

[7] The guidance provided in this position statement focuses on the use of VRI services by medical providers, including but not limited to hospitals, in-patient hospital settings, clinics, urgent care, and physicians’ offices.

[8] In the context of a medical setting, the term “deaf individual” includes, but is not limited to patients, family members, companions, or other individuals entitled to an equal opportunity to participate in and benefit from the services, programs, and activities of the medical provider. For more information about the scope of coverage, see the ADA and Section 504 and their implementing regulations and technical guidance. See also the Consent Decree in *Gillespie v. Dimensions Health Corporation*, No. 05-73 (D. Md. July 12, 2006), available here (<https://www.ada.gov/laurelco.htm>).

[9] NAD Model Policy for Effective Communication in Hospitals.

[10] Dep't of Justice, Title III Technical Assistance Manual, Section III-4.3200.

[11] 28 C.F.R. § 35.160(b)(2); 45 C.F.R. § 92.202 (effective July 18, 2016).

[12] A “qualified interpreter” means an interpreter who is able to interpret effectively, accurately, and impartially, both receptively and expressively, using any necessary specialized vocabulary. See 28 C.F.R. § 35.104 and 28 C.F.R. § 36.104.

[13] *See Section 504, Effective Communications, and Health Care Providers*, U.S. Department of Health and Human Services, Region III, Regional Technical Assistance Staff (January 1982), page 5.

[14] 28 C.F.R. § 35.104 (for Title II of the ADA); 28 C.F.R. § 36.303(b)(1) (for Title III of the ADA).

[15] 28 C.F.R. § 35.160(a)(1); 28 C.F.R. § 36.303(c)(1).

[16] 28 C.F.R. § 35.160(d); 28 C.F.R. § 36.303(f).

[17] **See** this ([http://www.calhospital.org/sites/main/files/file-attachments/The\\_Joint\\_Commission\\_-\\_Standards\\_FAQ\\_Chapter.pdf](http://www.calhospital.org/sites/main/files/file-attachments/The_Joint_Commission_-_Standards_FAQ_Chapter.pdf)).

[18] Initial contacts include phone calls in advance of arrivals.

[19] The medical provider shall maintain at least one contract with a local interpreting services provider.

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## DOING IT RIGHT—TEN EASY WAYS TO IMPLEMENT EFFECTIVE COMMUNICATION FOR EVERYONE

1. At all intakes including internet intakes ask the question, “Do you have a disability that affects your ability to give or get information?” Then if the person says YES give them clear direction on how to request accommodations.
2. When someone asks for accommodations (even if they do not use that word) begin the interactive process. Ask them if you can schedule a call (calling out of the blue might be hard). If you cannot provide a requested accommodation ask the patient more to find another way to communicate.
3. If someone identifies a disability, including but not limited to brain injury, mental illness or other disability that might signal communication needs, ask clarifying questions. Repeat back what you heard to make sure it was right.
4. Summarize the content at the end and ask them if they need an email or short memo capturing the basic points of the conversation.
5. When sending letters use at least 14 point font and bullet points with plenty of white space. If a response is needed by a date, **bold and box** the deadline.
6. Always have a phone number, email and regular mail address on any letter/form clearly available with an invitation to call with questions. **Bold and box** contact information and do not use multiple contacts on one page.
7. Give people clear instructions on what you do and do not want/need from them. How far should they go back? What detail do you need? Do you want as much as possible at the first step?
8. Tell people—in writing and verbally—what to expect in terms of timelines and the process.
9. Ask if they have any questions at the end of every interaction.
10. When dealing with someone who is upset or going very fast ask what you can do to help.



## NIDCD Fact Sheet | **Hearing and Balance**

# American Sign Language

### **What is American Sign Language?**

American Sign Language (ASL) is a complete, natural language that has the same linguistic properties as spoken languages, with grammar that differs from English. ASL is expressed by movements of the hands and face. It is the primary language of many North Americans who are deaf and hard of hearing, and is used by many hearing people as well.

### **Is sign language the same in other countries?**

There is no universal sign language. Different sign languages are used in different countries or regions. For example, British Sign Language (BSL) is a different language from ASL, and Americans who know ASL may not understand BSL. Some countries adopt features of ASL in their sign languages.

### **Where did ASL originate?**

No person or committee invented ASL. The exact beginnings of ASL are not clear, but some suggest that it arose more than 200 years ago from the intermixing of local sign languages and French Sign Language (LSF, or Langue des Signes Française). Today's ASL includes some elements of LSF plus the original local sign languages; over time, these have melded and changed into a rich, complex, and mature language. Modern ASL and modern



*A young boy signs "I love you."*

LSF are distinct languages. While they still contain some similar signs, they can no longer be understood by each other's users.

### **How does ASL compare with spoken language?**

ASL is a language completely separate and distinct from English. It contains all the fundamental features of language, with its own rules for pronunciation, word formation, and word order. While every language has

ways of signaling different functions, such as asking a question rather than making a statement, languages differ in how this is done. For example, English speakers may ask a question by raising the pitch of their voices and by adjusting word order; ASL users ask a question by raising their eyebrows, widening their eyes, and tilting their bodies forward.

Just as with other languages, specific ways of expressing ideas in ASL vary as much as ASL users themselves. In addition to individual differences in expression, ASL has regional accents and dialects; just as certain English words are spoken differently in different parts of the country, ASL has regional variations in the rhythm of signing, pronunciation, slang, and signs used. Other sociological factors, including age and gender, can affect ASL usage and contribute to its variety, just as with spoken languages.

Fingerspelling is part of ASL and is used to spell out English words. In the fingerspelled alphabet, each letter corresponds to a distinct handshape. Fingerspelling is often used for proper names or to indicate the English word for something.

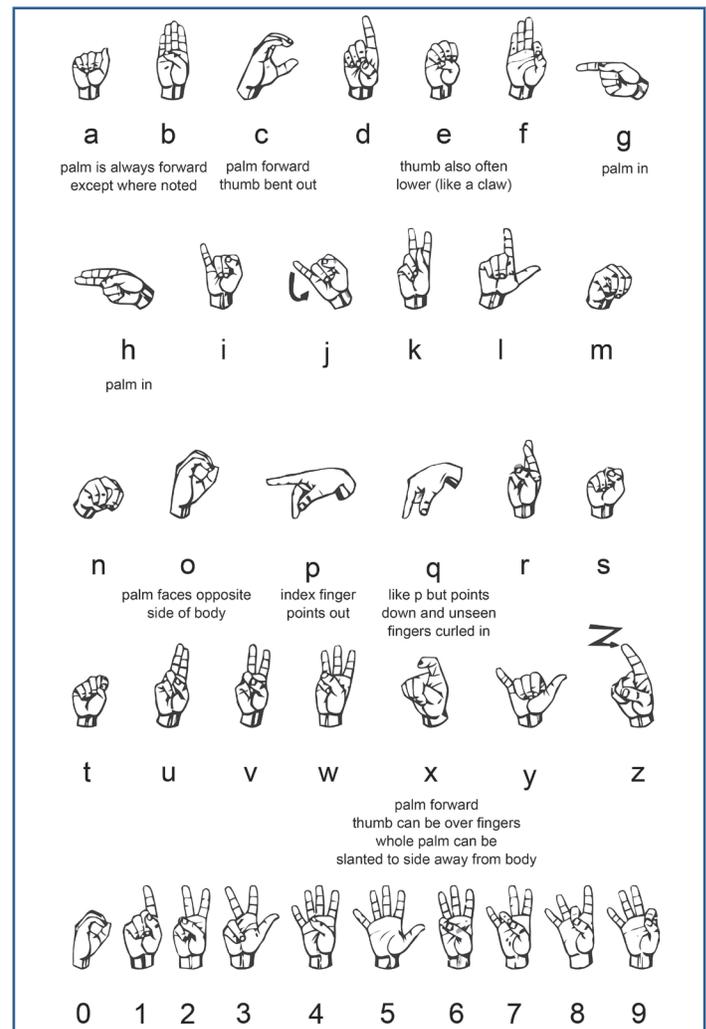
## How do most children learn ASL?

Parents are often the source of a child's early acquisition of language, but for children who are deaf, additional people may be models for language acquisition. A deaf child born to parents who are deaf and who already use ASL will begin to acquire ASL as naturally as a hearing child picks up spoken language from hearing parents. However, for a deaf child with hearing parents who have no prior experience with ASL, language may be acquired differently. In fact, 9 out of 10 children who are born deaf are born to parents who hear. Some hearing parents choose to introduce sign language to their deaf children. Hearing parents who choose to have their child learn sign language often learn it along with their child. Children who are deaf and have hearing parents often learn sign language through deaf peers and become fluent.

## Why emphasize early language learning?

Parents should expose a deaf or hard-of-hearing child to language as soon as possible. The earlier a child is exposed to and begins to acquire language, the better

that child's language, cognitive, and social development will become. Research suggests that the first few years of life are the most crucial to a child's development of language skills, and even the early months of life can be important for establishing successful communication with caregivers. Thanks to screening programs in place at almost all hospitals in the United States and its territories, newborn babies are tested for hearing before they leave the hospital. If a baby has hearing loss, this screening gives parents an opportunity to learn about communication options. Parents can then start their child's language learning process during this important early stage of development.



The ASL fingerspelling alphabet (also referred to as the American manual alphabet) is used to spell out proper names and English words.

## What research does the NIDCD support on ASL and other sign languages?

The NIDCD supports research on ASL, including its acquisition and characterization. Funded research includes studies to understand sign language's grammar, acquisition, and development, and use of sign language when spoken language access is compromised by trauma or degenerative disease, or when speech is difficult to acquire due to early hearing loss or injury to the nervous system.

Study of sign language can also help scientists understand the neurobiology of language development. In one study, researchers reported that the building of complex phrases, whether signed or spoken, engaged the same brain areas. Better understanding of the

neurobiology of language could provide a translational foundation for treating injury to the language system, for employing signs or gestures in therapy for children or adults, and for diagnosing language impairment in individuals who are deaf.

The NIDCD is also funding research on sign languages created among small communities of people with little to no outside influence. Emerging sign languages can be used to model the essential elements and organization of natural language and to learn about the complex interplay between natural human language abilities, language environment, and language learning outcomes. Visit the NIH Clinical Research Trials and You website (<https://www.nih.gov/health-information/nih-clinical-research-trials-you>) to read about these and other clinical trials that are recruiting volunteers.



*Teenage boy having a conversation using sign language.*



## Where can I find additional information about American Sign Language?

The NIDCD maintains a directory of organizations that provide information on the normal and disordered processes of hearing, balance, taste, smell, voice, speech, and language. Visit the NIDCD website at <https://www.nidcd.nih.gov/directory> to search the directory.

### More NIDCD fact sheets on Hearing and Balance:

- ▶ Assistive Devices for People with Hearing, Voice, Speech, or Language Disorders
- ▶ Cochlear Implants
- ▶ Hearing Aids
- ▶ Your Baby's Hearing Screening

Visit the NIDCD website at <https://www.nidcd.nih.gov> to read, print, or download fact sheets.

For more information, contact us at:

### NIDCD Information Clearinghouse

1 Communication Avenue  
Bethesda, MD 20892-3456  
Toll-free voice: (800) 241-1044  
Toll-free TTY: (800) 241-1055  
Email: [nidcdinfo@nidcd.nih.gov](mailto:nidcdinfo@nidcd.nih.gov)

<https://www.nidcd.nih.gov>

 Follow the NIDCD on Twitter at @NIDCD

**The NIDCD supports and conducts research and research training on the normal and disordered processes of hearing, balance, taste, smell, voice, speech, and language and provides health information, based upon scientific discovery, to the public.**



**American Sign Language**  
NIH Publication No. 11-4756  
March 2019



## Amplifying opportunity: Videoconferencing for people who are d/Deaf or hard of hearing

### THE PROBLEM

When Kelsey Sandella learned that a well-known public university was offering a live webinar on COVID-19's impact on people with disabilities, she was eager to attend. Because she is Deaf, Kelsey looked to the registration form for information on accommodations. Seeing nothing there, she reached out directly to the university. The response? No captioning would be available. They might be able to send her a transcript afterward, but no guarantees.

Putting aside the irony of a webinar about people with disabilities not accommodating people with disabilities: A university receiving federal funds must adhere to accessibility requirements outlined in the Americans with Disabilities Act (ADA), making this a clear violation. "They're a renowned university with the financial means to accommodate people, and they still didn't think about it," said Kelsey. "I've had this type of experience a lot, but I felt very dismissed."

According to the 2011 American Community Survey, about 11 million people in the United States, or 3.6 percent of the population, consider themselves d/Deaf or live with a serious hearing loss. In the era of COVID-19, they, like so many people, are watching educational opportunities, work meetings, health care appointments, and more move onto video streaming platforms. So in today's world, equal access to these opportunities and obligations is just as important as curb cuts or accessible parking spaces. The technology exists to make it possible. And yet on a regular basis, people who are d/Deaf or hard of hearing are shut out.



## THE BACKGROUND

A generation before the ADA, the Rehabilitation Act of 1973 demanded that people with disabilities receive reasonable accommodations from their employers to do their jobs. Section 504 applied to federal and federally funded programs and institutions such as private and public colleges and K through 12 schools.

When the ADA became law in 1990, it extended similar protections, requiring both private and public entities to provide reasonable accommodations to those with disabilities. Title II of the ADA primarily applies to local and state governments and public schools and colleges; Title III applies to “places of public accommodation,” such as doctors’ offices, movie theatres, parks, and private schools and colleges.

The ADA mandates that communication with people with disabilities be “as effective” as communication with others. All Title II and Title III entities must provide “auxiliary aids and services” when needed, so that someone with a vision, hearing or speech disability “can communicate with, receive information from, and convey information to” that entity. Though the original legislation did not address digital accessibility — the world’s first webpage would not go live until 1991 — requirements have since been broadened and further defined to include online media.

Over the past decade, as video platforms have grown in popularity and sophistication,

accessibility options have popped up in their wake. Here is a look at the leading ones today.

**Automated or auto-generated captioning** employs automated speech recognition technology to generate on-screen captions in real time.

- **Advantages:** This feature comes free on some video conferencing platforms, such as Microsoft Teams and Google Hangouts, and is activated with a simple toggle switch.
- **Disadvantages:** Automated-captioning technology cannot differentiate among speakers, making it unsuitable for larger meetings with multiple presenters or active participants. In addition, accuracy rates can be as low as 60 percent, which creates comprehension barriers and falls short of the ADA mandate.

**Communication Access Realtime Translation (CART), or human captioning,** is real-time captioning provided by certified CART writers. On some platforms, this captioning can be integrated and embedded directly within the video, which is generally preferred; on others, it may run in a separate window through a service like StreamText, a third-party “player.”

- Advantages: Trained captioners can type up to 260 words per minute with 98 percent accuracy and can differentiate among speakers. Also, some platforms that integrate CART, such as Zoom, allow the user to increase font size for easier reading; StreamText does this as well.

- Disadvantages: Human captioning can be costly, with charges anywhere from \$60 per hour to \$200-plus per hour.

People who are d/Deaf often prefer **Video Remote Interpreting (VRI)**, in which a third-party ASL interpreter is invited into a video meeting to offer on-the-fly translation of spoken words into ASL. Some service providers, such as Linguabee, even offer interpreters who have special expertise in fields such as law and health care.

- Advantages: VRI can work with any major video conferencing platform, and is irreplaceable for people who rely on ASL.

- Disadvantages: With rates often around \$2 per minute and common two-hour minimums, costs can quickly add up.

There is a common misconception that individuals who are d/Deaf or hard of hearing can be accommodated with either an ASL interpreter or captions. However, some d/Deaf people do not know ASL. On the other end of the spectrum, those who use ASL may not be able to readily understand captions, because the grammar and format of ASL differs from spoken English. Ensuring that online meetings are fully inclusive means accommodating requests for either.

## THE SOLUTION

When making arrangements to work online, leaders in business, education, health care, and other sectors must go beyond considering the usual issues of cost and security. Especially today, they also must factor in accessibility.

It starts with choosing a video conferencing platform. Because all should be able to integrate ASL interpreting, the major question is what each platform's captioning options are.

In a pinch, automated captioning may be good enough to make quick, small meetings effective. But the technology's inability to distinguish among multiple speakers, and its general lack of accuracy, renders it insufficient for exchanges ranging from telehealth conversations to university webinars.

That leaves human captioning, or CART, as the go-to solution for many businesses and institutions. Here's how some of the most popular virtual meeting platforms stack up.

<b>Platform Name</b>	<b>Integrated Captioning</b>	<b>Automated Captioning*</b>	<b>Call-out to Attendees**</b>	<b>Instructional Links***</b>
				<a href="https://streamtext.zendesk.com/hc/en-us/articles/210923003">https://streamtext.zendesk.com/hc/en-us/articles/210923003</a>
<b>Adobe Connect</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<a href="https://helpx.adobe.com/adobe-connect/using/accessibility-features.html">https://helpx.adobe.com/adobe-connect/using/accessibility-features.html</a>
<b>Big Blue Button</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<a href="https://www.youtube.com/watch?time_">https://www.youtube.com/watch?time_</a>
<b>BlackBoard Collaborate</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<a href="https://blackboard.com/resources/collaborate-live-captioning">https://blackboard.com/resources/collaborate-live-captioning</a>
<b>Facebook</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<a href="https://www.facebook.com/">https://www.facebook.com/</a>
<b>Google Meet</b>	<b>(must be encoded)</b>	<b>Yes</b>	<b>Yes</b>	<a href="https://support.google.com/meet/answer/7313544">https://support.google.com/meet/answer/7313544</a>
<b>GoToMeeting</b>	<b>No</b>	<b>No</b>	<b>Yes</b>	<a href="https://support.goto.com/meeting/help/what-accessibility-features-are-available-in-goto-meeting">https://support.goto.com/meeting/help/what-accessibility-features-are-available-in-goto-meeting</a>
<b>Microsoft Teams</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>	<a href="https://support.microsoft.com/en-us/office/use-live-captions-in-a-teams-meeting-">https://support.microsoft.com/en-us/office/use-live-captions-in-a-teams-meeting-</a>

<b>Platform Name</b>	<b>Integrated Captioning</b>	<b>Automated Captioning*</b>	<b>Call-out to Attendees**</b>	<b>Instructional Links***</b>
<b>Skype</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>	<a href="https://support.skype.com/en/faq/FA34877/how-do-i-turn-live-captions-subtitles-on-during-a-skype-call">https://support.skype.com/en/faq/FA34877/how-do-i-turn-live-captions-subtitles-on-during-a-skype-call</a>
<b>WebEx</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>	<a href="https://help.webex.com/en-us/WBX47352/How-Do-I-Enable-Closed-Captions">https://help.webex.com/en-us/WBX47352/How-Do-I-Enable-Closed-Captions</a>
<b>Youseeu</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<a href="https://bongolearn.zendesk.com/hc/en-us/">https://bongolearn.zendesk.com/hc/en-us/</a>
<b>YouTube</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<a href="https://support.google.com/youtube/">https://support.google.com/youtube/</a>
<b>Zoom</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<a href="http://support.zoom.us/ch/en-us/">http://support.zoom.us/ch/en-us/</a>

\*Automated captions are embedded into the platform. However, they rely on speech recognition software rather than human transcription; as such it is less accurate than professional captioning services.

\*\*This feature is important for attendees with low-vision or blindness. The host can have the platform call the entered number and allow the attendee to have audio access by answering the phone; this is NOT the same as a call in feature.

\*\*\*StreamText can be used with any platform. The meeting host must pay an additional fee to have a professional captioner present to provide live captions which will be linked in a second window.

For all of the above options, the best practice would be to contact a Communication Access Realtime Translation (CART) service, who will provide quotes as well as explain if the platform of choice will allow embedded (integrated) captioning or if a second window will need to be used.

Once a platform has been chosen and implemented, organizations should advertise that accommodations are available, and ask attendees which one(s) they need. These should include options not only for those who are d/Deaf or hard of hearing, but also for those who are blind or low vision. (See “Make it simple.”)

Beyond ADA compliance and simply doing the right thing, accessibility-minded decision-making yields other rewards. For

one thing, people without disabilities also benefit from good captioning; they can follow a meeting even when they need to mute their device, and enjoy better comprehension. It also improves the viewing experience for non-native speakers and people with learning disabilities. In addition, if there is consent from all participants, CART providers such as Alternative Communication Services (ACS) will produce a meeting transcript that can be shared and kept for future reference.



Accessibility is mandated by law, and it's time to change how we approach it. As we move more of our lives into the virtual realm, we must ensure that everyone — regardless of age, background, or ability — has the same opportunities to connect, learn and grow. By implementing accessible practices for people with disabilities, individuals and organizations can create a more inclusive, connected world — during COVID-19 and beyond.



## MAKE IT SIMPLE

Once the technology is in place, there's one more important piece to ensuring accessibility: inviting people to make accommodation requests.

On their registration and appointment forms, smaller organizations can simply encourage people to call or email a designated contact person to communicate their needs. Larger organizations, however, should allow participants to request accommodations directly within their online forms. Here is some sample language:

If you have a disability, please indicate which accommodation(s) you need to participate:

- American Sign Language (ASL) interpreter
- Communication Access in Real Time (CART) captioning
- Conference call-out to your phone
- PDF of presentation prior to event
- Transcript following the event
- Other (please specify)

To discuss a specific need or request not covered above, please call (enter phone number here) or email (enter email address here).

# WHO

## DOES THE IC HELP?

For people with disabilities who want more independence, The Independence Center (The IC) can walk with them on their journey to achieve their goals.

We serve people with disabilities in El Paso, Cheyenne, Kit Carson, Lincoln, Park and Teller counties. Services vary from county to county.

# WHAT

## TYPES OF DISABILITIES?



# ABOUT

## THE IC

Started in 1987, The Independence Center is a local nonprofit organization that provides traditional and self-directed home health care, independent living, and veterans' and advocacy services for people with disabilities. These services range from providing peer support, skills classes, and employment assistance to individual and systems advocacy. In addition, The IC runs a Certified Nurse Aide training program to equip the area with qualified CNAs.

The IC has over 300 employees today, with over 51% of their Center for Independent Living staff and board having a disability.



## HOME HEALTH CARE

The IC offers home health care that is skilled and unskilled, self directed or physician-directed, for all ages, and with the caregiver of your choice or an employee of The IC.

## CNA TRAINING

The Independence Center's CNA Training Program offers day and evening classes to become a qualified Certified Nurse Aide.

People with disabilities  
building community  
**THE INDEPENDENCE CENTER**